

THE THEORY OF MONOPOLISTIC COMPETITION:
WITH PARTICULAR REFERENCE TO ITS
VALIDITY WHEN CONSIDERED AS A THEORY
OF THE FIRM IN RETAIL TRADE

A thesis submitted in fulfillment of the
requirements for the degree of Master of
Arts at the University of Cape Town.

ROBERT ROTHSCHILD

October 1968.

The copyright of this thesis is held by the
University of Cape Town.
Reproduction of the whole or any part
may be made for study purposes only, and
not for publication.

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

INTRODUCTION

The development, in the early '30's, of the Theories of Monopolistic and Imperfect Competition, provided a valuable contribution to the toolkit of the theoretical economist. Subsequent work has both amplified and clarified the area of general applicability and a sophisticated body of analysis has been established.

In certain respects however, the framework has not received sufficient attention. There is difficulty in explaining the phenomena experienced in retailing without placing a great strain upon the fabric of orthodox theory.

The purpose of this study is to provide a picture of the theory as it has been developed over almost four decades, and ultimately, after discussion, to proceed to the development of an expanded analysis.

I should like to thank my supervisor, Mr Z.S.A. Gurzynski of the Department of Economics at the University of Cape Town, for the great help and valuable advice which he gave in the preparation of this thesis. Professor H.M. Robertson, head of the Economics Department at the University of Cape Town, and Mrs M. Mark, a member of staff, were both very kind in reading the manuscript and suggesting important modifications. I also thank Miss Sally Carpenter for typing the manuscript.

Robert Rothschild.

University of Cape Town,
October 1968.

C O N T E N T S

	Page
INTRODUCTION	
CHAPTER I	1
CHAPTER II	19
CHAPTER III	40
CHAPTER IV	72
CHAPTER V	111
CHAPTER VI	135
CHAPTER VII	152
CHAPTER VIII	169
BIBLIOGRAPHY	172

CHAPTER I
THE ORIGIN OF THE THEORIES

In the Foreword to her Economics of Imperfect Competition⁽¹⁾ Professor Robinson points out that her ideas owe much to the work of, among others, Mr Piero Sraffa. In his article on 'The Laws of Returns Under Competitive Conditions'⁽²⁾, Mr Sraffa provided the first discussion of the possibility of establishing the theory of value on the basis of monopoly analysis, and also suggested that:

"Of course, when we are supplied with theories in respect to the two extreme cases of monopoly and competition as part of the equipment required in order to undertake the study of the actual conditions in the different industries, we are warned that these generally do not fit exactly one or the other categories, but will be found scattered along the intermediate zone, and that the nature of an industry will approximate more closely to the monopolist or the competitive system according to its particular circumstances..."⁽³⁾

This concept provided the basis for the work of Professor Robinson, since it introduced the possibility of an "intermediate theory"⁽⁴⁾, capable of accounting for the situations which lie between monopoly and competition.

The most striking similarities, however, arise in the comparison of the works of Mr Sraffa and Professor Chamberlin. Here the relationship is less obvious, since Professor Chamberlin's study was in the processes of completion at the time that Mr Sraffa's article appeared. Mr Sraffa's recognition of the importance of "product differentiation", as Chamberlin came to call it, made itself evident thus:

"... we are led to ascribe the correct measure of importance to the chief obstacle which hinders the free play of competition, even where this appears to predominate, and which at the same time renders a stable equilibrium possible even when the supply curve for the products of each individual producer is descending - that is, the absence of indifference on the part of the buyers of goods as between the different producers."⁽⁵⁾

This view resulted in the demand curve which characterises

-
- (1) Robinson, Joan: The Economics of Imperfect Competition, London, 1965.
(2) Economic Journal, December 1926.
(3) Ibid., p. 542.
(4) Chamberlin, E.H.: The Theory of Monopolistic Competition, 7th edition, Cambridge, Mass., 1960.
(5) Sraffa, p. 544.

the "intermediate theory" of orthodox monopolistic competition analysis. The belief that each producer possesses a degree of monopoly over the product he is selling was expressed by Sraffa in terms of elasticity:

"In the intermediate cases ... the significance of a moderate elasticity in the demand is that, although the monopolist has certain freedom in fixing his prices, whenever he increases them, he is forsaken by a portion of his purchasers, who prefer to spend their money in some other manner." (p. 545).

In this area, the ideas expressed by Sraffa are almost identical to those discussed at greater length by Chamberlin.

Where there is correspondence between the works of Chamberlin and Robinson, it is safe to conclude that the connecting link lies in Sraffa's original article.

Professor Chamberlin has pointed out⁽¹⁾, however, that there is a danger in believing that the "increasing returns" thesis, developed by Sraffa and others⁽²⁾ has some bearing on the issue of competition, and suggests that this misconception is partly due to the heavy emphasis which Professor Robinson places on such works. He indicates that both he and Professor Robinson have

"clearly defined the problem (for the case of large numbers) with reference to factors affecting the shape of the demand curve, and without reference to cost conditions"⁽³⁾,

and for that reason, Sraffa's observation - valid though it is - that equilibrium is achieved at the diminishing cost phase of the firm's cost of production curve, is one of the points in his analysis which is of little value in placing the works of either Robinson or Chamberlin in historical perspective.⁽⁴⁾

- (1) 'Monopolistic or Imperfect Competition?', Quarterly Journal of Economics, August 1937, p. 560.
- (2) Particularly: Shove, G.F.: 'The Representative Firm and Increasing Returns', Economic Journal, March 1930, and Harrod, R.F., in a series of articles published in the Economic Journals over the period 1930-1933 inclusive.
- (3) 'Monopolistic or Imperfect Competition?', p. 560.
- (4) Sraffa concluded that under "competitive" conditions, costs of production would be constant in the face of minor variations in output. For this reason, the tendency for costs to change with changes in output implied that the principle of monopoly merited further examination.

To Chamberlin the development of the theory of Monopolistic Competition required intense analysis of the duopoly systems of Cournot and Edgeworth⁽¹⁾, particularly Cournot's "determinate" solution with price lying between monopoly price and perfectly competitive price, and Edgeworth's indeterminate solution, with price "oscillating continually between the two extremes"⁽²⁾, both of which provided a rough guide to further theorizing. However, as Chamberlin himself has pointed out⁽³⁾, there was little besides this, and the recognition of the possibility of developing an intermediate theory was left to him. It was simply a question of observing two extreme theoretical alternatives for the analysis of business behaviour. It became quite obvious that the theory of "pure competition" could not admit the elements of monopoly which characterize business activity, since it implies a type of competition which is free of monopoly interest, and therefore free of any control over price which might be available to an individual producer. This implies, in turn, that all producers sell a homogeneous good on an identical market, since if any individual seller produced a good different - no matter to what small degree - from those of his competitors, he would possess control over price and would therefore not fulfil the requirements of pure competition. Similarly, the theory of Monopoly, as it had been developed prior to the publication of Chamberlin's study, was based on the principle that pure monopoly could only exist where one producer had complete control over supply. Since the question of substitutability arose at this point it became necessary to define the "product" with great care. The fact that a seller has complete control over the supply of a single product does not imply that there is not competition from more or less imperfect substitutes. The fact of these substitutes is one of the reasons why the theory of Monopolistic Competition originated.

Chamberlin has pointed out that the "isolated monopolist" (a monopolist who need not allow for the reactions of his competitors) is, like anyone else, "beset by the competition of others locating as near him as they can in economic space."⁽⁴⁾ However, the degree of competition - a function of the nature of the

(1) Monopolistic Competition. This point is made in the discussion.

(2) *Ibid.*, p. 4.

(3) *Ibid.*, p. 5.

(4) 'Monopolistic Competition Revisited', Economica, November 1951, p. 353.

substitutes - is not necessarily a determinant of the monopolist's level of profits, since these may be large or small depending on the demand for his product. Similarly, the "pure competitor" has no control over the market for his output and is obliged to accept the price prevailing at the time of sale.

Since neither "pure" competition nor "pure" monopoly serve the purpose of describing adequately the intermediate case, the term Monopolistic Competition is used to qualify the hybrid system.

Professor Robinson has indicated that

"When a single producer controls the whole output of...a commodity the plain man's notion of a monopolist and the logical definition of a monopolist as a single seller coincide..."(1)

She observes that

"Every individual producer has the monopoly of his own output - and if a large number of them are selling in a perfect market the state of affairs exists which we are accustomed to describe as perfect competition."(2)

In this respect, the definition of monopoly can be used as a starting point for the analysis of "competition".

Professor Chamberlin has suggested that there are some difficulties in assuming the analytical process to apply in reverse. Whilst he follows an argument similar to that of Professor Robinson, in so far as he maintains that the theory of Pure Competition provides a less than adequate explanation of economic reality, he tends to regard the economic order as Perfectly Monopolistic.

"Differentiation implies gradations, and it is compatible with perfect monopoly of one product that control stops short of some more general class of which this product is a part."(3)

In this respect, Chamberlin's attitude must be clearly understood. Whilst he reasons that the theory of Pure Monopoly is capable of providing an insight into the theory of Monopolistic Competition, it does not fulfil the analytical role of the latter. Chamberlin merely indicates with great forcefulness that the theory of Pure Competition is far less useful as a starting point for Monopolistic Competition theory than is the theory of Pure Monopoly (an argument implicit in Robinson's comment - above). Pure Competition theory,

(1) The Economics of Imperfect Competition, p. 5.

(2) Ibid., p. 5.

(3) The Theory of Monopolistic Competition, p. 65. He proceeds to a detailed investigation of the argument, but fails to find fault with it.

which ignores the significance of monopoly elements, or regards them as "imperfections", only considers one aspect of the problem. Pure Monopoly theory on the other hand, allows for the principle of competition amongst monopolists and therefore is of greater analytical value.

The question of group equilibrium arises at this point. Since Monopoly theory is developed on the assumption that the individual producer is faced with a given demand curve, the problem of group interdependence cannot be provided with an adequate solution. Where it is the case that a number of monopolists are in competition with one another, the Demand curve for any single producer will be a function of the price-output policies of his rivals. In this respect, the assumption that a producer is in no way subject to the influence of his rivals cannot accommodate the real-life situation and the theory of Monopoly proves inadequate. Similarly, the theory of Pure Competition is unable to provide the analytical wherewithal^{apparatus} in such a case, since it cannot, by definition, be applied in situations where the market is characterized by product differentiation - the basis of monopolistic competition analysis.

For this reason, the theory of Monopolistic Competition came to be an accepted part of the economist's tool-box. It was the first system to provide a valid examination of competitive interdependence and product differentiation.

It has already been indicated that Professor Robinson's work was based extensively on the writing of Sraffa, Shove, Robinson and others, while Professor Chamberlin's analysis was completed either before or concurrently with, such authors, but certainly did not constitute a follow-on in any respect. We have noted that Chamberlin's The Theory of Monopolistic Competition and Robinson's The Economics of Imperfect Competition display certain common characteristics in so far as they both recognize the intermediate zone between pure competition and pure monopoly. They also appear to correspond on the idea that monopoly analysis holds more for Monopolistic Competition theory than does pure competition analysis. At the same time, a great deal of debate has accompanied the development of the two theories and the possibility of major distinctions between them has arisen.

In his 'The Origin and Early Development of Monopolistic Competition Theory'⁽¹⁾, Professor Chamberlin attempts to show the

(1) Quarterly Journal of Economics, November 1961.

"intellectual history" of his book.⁽¹⁾ According to the author, the origins of the theory lie in the Taussig-Pigou controversy over joint cost in the railway industry⁽²⁾, in which Professor Taussig held that coal and copper were charged different railroad rates as a result of joint-cost, while Professor Pigou held that this was due to monopoly. The question of monopoly raised the issue of "different markets" and the possibility of a "slight differentiation" which would allow adjustment of price and the recognition of mutual dependence. Chamberlin pointed out in a footnote to his thesis in 1927 that an argument could be provided which would support both points of view, and the development of the idea resulted in an attempt at working out a "synthesis between monopoly and competition"⁽³⁾. The controversy itself is not important here, except in so far as it serves to clarify the origins of Chamberlin's theory - a subject about which there appears to have been a good deal of disagreement.⁽⁴⁾ At the same time, Chamberlin goes to great lengths to explain the distinctions which exist between his approach to the theory and the original proposals made by Sraffa. We have already made a brief mention of the question of "increasing returns", but there are a number of other issues which have become a trifle clouded with the passage of time. Where theorists have fallen into the error of identifying the works of Chamberlin too closely with those of Sraffa, it should be explained⁽⁵⁾ that (i) Sraffa made no use of the concept of "oligopoly" to criticise the current state of the theory. Chamberlin, on the other hand, devotes a good deal of his analysis to a discussion of the duopoly problem. (ii) According to Chamberlin, Sraffa had "neglected the problem of entry (and by inference exit), not through oversight, but deliberately ..."⁽⁶⁾

(1) Ibid., p. 515. This attempt was made in the hope that greater clarity would be achieved with regard to the nature of his theory and the aspects which he held had been overlooked or misinterpreted by others.

(2) Ibid., Chamberlin refers to the Quarterly Journals of Economics of February, May and August 1913.

(3) Ibid., p. 520.

(4) Chamberlin mentions the fact that his work has been diversely held to be a result of the collapse of Marshall's doctrine and a product of the depression.

(5) For a more detailed discussion of the matter, see Chamberlin, Quarterly Journal of Economics, 1961, p. 532 ff.

(6) Ibid., p. 535.

A discussion of the reasons for the omission would not be relevant at this point, since we are concerned essentially with the fact that the omission did arise. The result was that Sraffa tended to disregard the importance of competitive forces within the system, so that he could not allow adequately for the principle of price competition⁽¹⁾. However, in her 'Imperfect Competition and Falling Supply Price'⁽²⁾, Professor Robinson develops the concept of falling supply price originally considered at great length by Mr Sraffa and provides the "tangency" solution which has today come to characterize the equilibrium of the industry under conditions of monopolistic competition. Professor Robinson points out that:

"In short, an increase in the total demand for the commodity, when the market is imperfect, is far more likely to lower the average cost curves of the firms than when the market is perfect." (3)

She concludes that:

"It therefore appears, after all, to be highly probable that falling supply price is a result of imperfect competition", (4)

which would appear to confirm the views expressed in the article 'Increasing Returns and the Representative Firm: A Symposium'.⁽⁵⁾

The above argument on the subject of tangency was in no way implicit in Sraffa's paper. (iii) Sraffa devotes most of his attention to the Industry, and far less to the firm. Chamberlin places most of his emphasis on the latter, and makes the observation⁽⁶⁾ that Robinson follows Sraffa's example in her The Economics of Imperfect Competition in that she only devotes Books II and V to the firm, and the rest to the industry.

"The difference between the two worlds (i.e. one in which each seller has a monopoly of his own distinguishable product, and one in which there is a three-way comparison between monopolized industries of imperfectly competitive industries and of perfectly competitive industries), is explained by the fact that one of them arose out of the increasing returns controversy and the other did not." (7)

-
- (1) Ibid., p. 535, note 6. "In his 'turn towards monopoly', Mr Sraffa seems to have gone far indeed 'in the opposite direction' in his elimination of competitive forces from the system."
- (2) Economic Journal, December 1932.
- (3) Economic Journal, December 1932, p. 554.
- (4) Ibid., p. 554,
- (5) Economic Journal, March 1930. Articles were contributed by D.H. Robertson, G.F. Shove and P. Sraffa.
- (6) Quarterly Journal of Economics, November 1961, p. 537.
- (7) Ibid., p. 537.

At this point a brief discussion of the major distinctions between the works of Professors Chamberlin and Robinson would be in order, since a clear understanding of the concepts introduced and the terminology employed is necessary before a discussion of theory can be undertaken.

The more significant distinctions between the two works were the subject of a series of articles published shortly after the appearance of the theories in 1933 and to which a number of writers addressed themselves⁽¹⁾. In his 'Monopolistic or Imperfect Competition?' Professor Chamberlin attempts to show that neither the theories of "Monopolistic" nor "Imperfect" Competition are in any way related to the Marginal Revenue Curve. He suggests that this misconception is the result of Professor Robinson's expressed belief that

"this piece of apparatus plays a great part in my work, and my book arose out of the attempt to apply it to various problems ..."(2)

Although Chamberlin would concede that it has moderate analytical value, he would also point out that, so far as the determination of either price or profits is concerned, it is not at all a useful tool.⁽³⁾ In each case, although it reveals output quite readily, it has to be supported by Average Revenue Curves, and where it is employed in order to give an idea of group equilibrium, as opposed to single firm equilibrium, it can be entirely replaced by these curves. As Chamberlin has pointed out⁽⁴⁾, Professor Robinson's "double condition"⁽⁵⁾ for equilibrium (with Marginal Revenue equal to Marginal Cost, and Average Revenue equal to Average Cost) is not necessary, since the equation of the latter will imply the equation of the former and, therefore, the necessity for including Marginal factors is displaced.

(1) Joan Robinson, 'What is Perfect Competition?', Quarterly Journal of Economics, November 1934; E.A.G. Robinson, 'Monopoly and Imperfect Competition', Economic Journal, March 1937; E.H. Chamberlin, 'Monopolistic or Imperfect Competition?', Quarterly Journal of Economics, August 1937; N. Kaldor, 'Equilibrium of the Firm', Economic Journal, March 1934; E.H. Chamberlin, 'Reply to Mr Kaldor', Quarterly Journal of Economics, May 1938; and others (see Bibliography below).

(2) p. 558.

(3) Ibid., p. 558 ff.

(4) Ibid., p. 559.

(5) Robinson, The Economics of Imperfect Competition, p. 94

Mr Kaldor has criticized Professor Chamberlin on this issue⁽¹⁾, and suggests that there are essentially no differences in the subject matter of the two theories. In the case of the Marginal Revenue Curve, he points out that

"in order to know the relation of price to marginal cost, we have to know the position of marginal revenue. Moreover, the only simple criterion that enables us to distinguish between degrees of impurity in competition is the relative magnitude of price and marginal revenue i.e. the actual elasticity of demand at the equilibrium level of output."⁽²⁾

According to Chamberlin, however,⁽³⁾ the establishment of the relation between Price and Marginal Cost could quite easily be undertaken using only the average curves to discover monopoly output and price and observing the Marginal Cost for this output. In this context, Professor Chamberlin's argument appears to be more convincing.

Another misconception which Chamberlin finds it necessary to point out, and which has its roots in Robinsonian literature⁽⁴⁾, is the belief that differentiation of the product is largely a function of the number of sellers in the market and, should such number increase, the effect would be to render the demand curves for each seller more elastic. This argument can be countered fairly readily by the suggestion that an increasingly large number of dissimilar products does not necessarily imply that any one product is likely to become more like any other and the degree of substitutability might well remain unchanged. At the same time, the competition of a wide range of substitutes, while it might induce a shift in the position of the demand curve from a level of "above-normal" profits to one of tangency with the Average Cost curve, need not induce a change in the slope. This consistency would be indicative of stability of consumer preferences and would tend to counter the argument that increasing elasticity of demand would arise.

Mr Kaldor has also dealt with this point⁽⁵⁾, and indicates that a shift in the demand curve to the left will have the effect of increasing demand elasticity at the "equilibrium level of output"⁽⁶⁾ and bringing price closer to marginal cost. Market

(1) 'Professor Chamberlin on Monopolistic and Imperfect Competition', Quarterly Journal of Economics, May 1938, p. 513.

(2) Ibid., p. 515.

(3) 'Reply to Mr Kaldor', Quarterly Journal of Economics, May 1938, p. 531.

(4) Ibid., p. 559 ff. He quotes Robinson, p. 101.

(5) 'Professor Chamberlin on Monopolistic and Imperfect Competition', p. 516 ff.

(6) Ibid., p. 519.

Imperfection will be diminished and the whole situation will tend to approximate Perfect Competition more closely. Chamberlin has replied to this suggestion by informing Mr Kaldor that, in terms of his definition, the addition of new "products" to those already existing in the range would, as already indicated, tend to shift the Demand curve to the left, but would not necessarily change its slope since the fact that a new product has been added would mean that the range of products would have to be redefined, with the result that the type of competition prevailing amongst products would have changed and old conditions would no longer apply.

The net effect of this is to render the concept of changing elasticity vague and as equally as subject to criticism as is the idea of constant elasticity.

As far as the question of freedom of entry is concerned, Chamberlin and Robinson appear to display certain differences, in that, as the former points out:

"The question remains whether 'freedom of entry' is compatible with Monopolistic Competition. There seems to be no doubt that Mrs Robinson thinks it is, and I have, up to this point, written as if it were. I should like now, however, to record a change of view in the matter." (1)

He adds that freedom of entry is incompatible with Monopolistic Competition if it implies freedom to duplicate, since under these circumstances, the principle of product differentiation must necessarily collapse. (2) In so far as this freedom of entry only implies that a substitute similar to the original product is introduced, the concept remains analytically valid, because

"in this sense freedom of entry is universal, since substitutes are entirely a matter of degree." (3)

Chamberlin regards Professor Robinson's attempt to show that "imperfection" is not the same as product differentiation, as another misconception. (4) The difficulty appears to lie in the use of the terminology and the fact that both writers take different positions on the question of "pure" and "perfect" competition. In his The Theory of Monopolistic Competition, Professor Chamberlin draws a distinction between the two. (5)

(1) Chamberlin, Quarterly Journal of Economics, May 1938, p. 566.

(2) Ibid., p. 567.

(3) Ibid., p. 567.

(4) 'Monopolistic or Imperfect Competition?'

(5) P. 7.

"'Pure' and 'Perfect' Competition must not be identified; and to consider the theory of monopolistic competition vaguely as a theory of 'imperfect' competition is to confuse the issue."

Chamberlin considers "pure" competition as a form of competition completely "unalloyed with monopoly elements"⁽¹⁾, as opposed to "perfect" competition which may imply a number of characteristics other than merely a lack of monopoly elements. These might be, for example, perfect mobility of the factors of production and instantaneous reaction (in theory) on the part of the owners of these factors, to changes in the conditions of demand, or perfect knowledge of the future on the part of the entrepreneur. The implications of "pure" competition, limited, as they are, to an absence of monopoly, are not nearly as complex as those of "perfect" competition, and the concepts may very well be employed in differing contexts. At the same time, Professor Robinson has pointed out that

"... Professor Chamberlin's terminology is somewhat misleading, and pays a verbal tribute to the old confusion."⁽²⁾

She suggests that it would have been better to define "perfect" competition in the terms used for "pure" competition, with the result that the particular theorist would be obliged to state specifically his assumptions for each problem. As far as Chamberlin's view of "perfection" is concerned, Professor Robinson appears to regard him as being not sufficiently explicit.

"He seems to associate imperfection simply with differentiation of the product."⁽³⁾

Professor Robinson denies the validity of this argument and suggests that

"Physical differentiation is not a necessary condition for market imperfection."⁽⁴⁾

She proceeds to the example of two firms producing articles which are exactly alike, distinguishable only by the manufacturers' names and therefore experiencing different scales of preference

(1) Ibid., p. 6.

(2) 'What is Perfect Competition?', Quarterly Journal of Economics, November 1934, p. 105.

(3) Ibid., p. 112.

(4) Ibid., p. 112.

amongst buyers.⁽¹⁾ At the same time, she points out that differentiation is not a sufficient condition for imperfection either, and indicates that two firms may be producing differentiated commodities which they sell in a perfect market.⁽²⁾ If all individual buyers displayed the same preferences for one of the two products and, depending on the relative prices of each, would deal with only one of the two firms at any one time, demand for any one of the products would be perfectly elastic and competition could thus be perfect. In the case of "necessary conditions" for imperfection on the market, Chamberlin⁽³⁾ has pointed out a flaw in Professor Robinson's argument by showing that The Theory of Monopolistic Competition explicitly recognizes the significance of Trade Names as a means towards product differentiation.⁽⁴⁾ As far as the "sufficient conditions" are concerned, Chamberlin has attempted to indicate that Professor Robinson's example, although true, is impossible to parallel in real life, and therefore of little analytical value. Triffin, in his Monopolistic Competition and General Equilibrium Theory⁽⁵⁾, points out, with the aid of comparative extracts from the writings of both the authors, that both Chamberlin and Robinson are "tackling, in fact, the same general problem", with the exception that Professor Robinson does not mention Patents in her examples of product differentiation. Triffin considers this omission to reflect partly the suggestion, made by Professor Chamberlin, that

"Mrs Robinson still conceives of monopoly and competition as mutually exclusive, and not as analytical and complementary aspects of one and the same reality."⁽⁶⁾

In this respect Mr Kaldor makes a helpful distinction⁽⁷⁾ between monopolies (in the form, for example, of patents) and "imperfect competition" (in the form of competition between monopolists).

- (1) Ibid., p. 112. R.F. Kahn, in his article, 'Some Notes on Ideal Output', Economic Journal, March 1935, writes:
"Competition is imperfect if the price obtainable by an individual firm is not independent of its own output, or, in other words, if the demand for the individual firm is not perfectly elastic." (p. 20)
- (2) Ibid., p. 113.
- (3) 'Monopolistic or Imperfect Competition?', p. 568.
- (4) The Theory of Monopolistic Competition, p. 56
- (5) Cambridge, Mass., 1949, p. 37.
- (6) Ibid., p. 42.
- (7) 'Professor Chamberlin on Monopolistic and Imperfect Competition', p. 528.

Horace G. White, Jnr., in an article entitled 'A Review of Monopolistic and Imperfect Competition Theories'⁽¹⁾, points out that Professor Robinson holds Chamberlin's terminology (in so far as it refers to perfect competition) to imply that perfect competition is identifiable with the notion of "free entry into, and normal profits in, an industry in long period equilibrium."⁽²⁾ He points out that in this respect Chamberlin's terminology is superior, since his "perfect" competition includes the concept of free entry while Professor Robinson's suggestion that costs of entry are not exclusive to "imperfect" competition, (but apply also under conditions of "perfect" competition), would indicate that they must exist under conditions of "pure" competition as well. As White points out, a valuable feature of Chamberlin's terminology is that it possesses a greater degree of clarity and also that

"...an attractive feature of the distinction between 'pure' and 'perfect' competition (is) that the traditional association of mechanical perfections with the latter is not upset, while a wholly new term is applied to the conditions which Mrs Robinson postulates."⁽³⁾

The issue which might now be raised is that the Robinsonian analysis fails to combine the two extremes of monopoly and competition and indeed tends to regard the two as being mutually exclusive. Chamberlin, on the other hand, has striven for and achieved a blend of both.

Professor Chamberlin, in his article, 'Monopolistic Competition Revisited'⁽⁴⁾ indicates that one of the major differences between the "Theory of Monopolistic Competition" and the "Theory of Imperfect Competition" is the fact that, while the former takes cognizance of the possibility of fusing "Monopoly" and "Competition" into a single body of analysis, the latter treats them as if they were separate entities, leaving the "conventional dichotomy as sharp as ever".⁽⁵⁾ He points out that "monopoly" in the Robinsonian view means control over supply in the industry sense, and, should the industry consist of one firm, only in this sense would it apply to the firm. In this regard, Professor Robinson's analysis retains a Marshallian quality. In order to clarify

(1) American Economic Review, December 1936.

(2) *Ibid.*, p. 642.

(3) *Ibid.*, p. 642.

(4) Economica, November 1951.

(5) *Ibid.*, p. 360.

the position, Triffin⁽¹⁾ suggested that Professors Chamberlin and Robinson held divergent views on the definition and nature of monopoly, and maintained that the latter's diagrams resembled cases of simple monopoly, while the former's contained analyses of the final equilibrium position of one seller in relation to his competitors. The difference in approach then becomes clear. Professor Chamberlin assumes that all firms will be selling the same quantities at the same prices, and proceeds to examine the reactions which take place throughout the system in so far as individual and group equilibrium are concerned. Professor Robinson on the other hand, assumes that all firms, but one (within the group), are in equilibrium, and devotes most of her analysis to considering how that individual firm will achieve equilibrium. The structure of mutual interdependence evolved in The Theory of Monopolistic Competition and based on the price/output relationships of all firms within a group, is absent from the work of Professor Robinson, who

"retains for study, not changes in production by other firms in the group, but only the entry or exit of firms and arbitrary shifts in the total demand for the commodity turned out by the industry."(2)

Another distinction between Chamberlin's and Robinson's points of view has been indicated by Triffin. In this connection, he attempts to show that the different definitions of the sales curve of the individual seller used by both of the authors, has an important influence in determining the direction of the theories.⁽³⁾ Professor Robinson writes

"In an industry which is conducted in conditions of imperfect competition, a certain difficulty arises from the fact that the individual demand curve for the product of each of the firms composing it will depend to some extent upon the price policy of the others."(4)

In this respect, she is obviously in agreement with Professor Chamberlin. However, as far as the incorporation of this concept in diagrammatic form is concerned, Professor Robinson holds that the individual firm's demand curve is able only to indicate the

(1) Monopolistic Competition and General Equilibrium Theory, p. 42.

(2) Ibid., p.44.

(3) Ibid., p. 44.

(4) The Economics of Imperfect Competition, p. 21.

"full effect upon the sales of that form which results from any change in the price which it charges, whether it causes a change in the prices charged by the others or not."(1)

This is additionally interesting, since Professor Robinson does not distinguish between conditions of equilibrium for "small" and "large" groups as Professor Chamberlin does. Triffin has pointed out⁽²⁾ that among Chamberlin's solutions, only one for the small group fits the approach taken by Robinson and takes into account in the sales curve the seller's "full influence, direct and indirect, upon the situation."⁽³⁾ In the "large group" case, the difference in approach is obscured, since Chamberlin assumes that no sellers will react to the moves of an individual competitor. Diagrammatically the distinctions arise from the use of Chamberlin's DD' curve, which indicates clearly the influence of factors external to the firm on group equilibrium, while, as has already been indicated, Professor Robinson's curve is essentially one representing pure monopoly.

In summarizing the nature of the distinctions, Triffin concludes that, had Chamberlin made an assumption similar to that of Robinson's, i.e. that all firms but one are in equilibrium, his diagram in the large group would have been similar to Professor Robinson's, with dd' not shifting and DD' not appearing.⁽⁴⁾ In this context it would seem as if the difference lies in the starting points of the respective analyses. In the small group case, the fact that Professor Robinson includes the interdependence characteristics in her analysis already, means that her dd' curve does not shift, while, under any circumstances (even using Professor Robinson's initial assumption), Chamberlin's would have done so.

In his 'Monopolistic or Imperfect Competition', Professor Chamberlin has pointed out that Professor Robinson, in introducing her concept of "Imperfect Competition" is merely re-stating the well-known rather than providing a fruitful blend of "monopoly" and "competition".

"Competition and Monopoly go their ways without the least overlapping, and interference with one's categories of thought is held at a minimum."⁽⁵⁾

(1) Ibid., p. 21.

(2) Monopolistic Competition and General Equilibrium Theory, p. 45.

(3) Ibid., p. 45 (Quoted from The Theory of Monopolistic Competition, p. 100).

(4) Ibid., p. 46.

(5) p. 572.

Chamberlin makes reference⁽¹⁾ to Professor Robinson's inability to arrange

"actual cases in a series of which pure monopoly would be the limit at one end and pure competition at the other."⁽²⁾

and compares this with his own expressed belief⁽³⁾ that this is a "cornerstone of the theory"⁽⁴⁾. The conclusion he gives is that Professor Robinson does not in fact regard monopoly and competition as being anything but mutually exclusive, and that she appears to consider an individual seller to be a monopolist whether he is selling under conditions of perfect or imperfect competition.

Professor Chamberlin produces a number of inferences from Professor Robinson's point of view. Firstly, since all profits are competitive in the Robinsonian system, the entire question of monopoly profits can be made redundant, since a broad definition of an "industry" will completely eliminate any possibility of making profits out of the control of a single product.⁽⁵⁾ This is not so under conditions of monopolistic competition, where the fact of product differentiation permits a seller to derive "monopoly profits" from the sale of his product.

Secondly, he indicates that "Free Enterprise" has consistently tended to become associated with the rather loose concept "competition", either "pure" or "perfect".⁽⁶⁾ Instead, however, it would appear as if "monopolistic competition" is a category more suited to describing the outcome of "Free Enterprise", in the sense that under such conditions business-men will, in competing with one another, try to distinguish their products and indulge in the processes of advertising which characterize "monopolistic competition" as against "pure" or "perfect" competition. In other words, "free enterprise" is merely a "monopoly-building" on the part of each seller.

Thirdly, the question of numbers arises. We have already noted the distinction between the works of Professor Chamberlin and Professor Robinson in respect of "small" and "large" groups. In her 'What is Perfect Competition?'⁽⁷⁾, Professor Robinson writes:

(1) Ibid., p. 574.

(2) The Economics of Imperfect Competition, p. 4.

(3) The Theory of Monopolistic Competition, pp. 63, 64.

(4) 'Monopolistic or Imperfect Competition' p. 574.

(5) Ibid., p. 576.

(6) Ibid., p. 576.

(7) Quarterly Journal of Economics, November 1934.

"It is sometimes supposed that for competition to be perfect, it is necessary that the number of buyers should be large. But this is the reverse of the truth."(1)

However, the suggestion that the supposition is untrue is based entirely on the belief that "perfect" competition can in some way be expanded as a concept to include the principle of product differentiation, and that it is possible for all buyers to be exactly alike in their preferences⁽²⁾ - a belief which does not seem to be very realistic, as Chamberlin has pointed out⁽³⁾, and which Professor Robinson considers possible only in one case; where there is only one buyer for each firm⁽⁴⁾. Using the preceding argument, if there is to be perfect competition among sellers, it would seem that "monopoly" is a necessary condition, so that this situation, coupled with the monopoly which has evidenced itself above, emerges in the new form of "bilateral monopoly"⁽⁵⁾. The reasoning then, is that for "perfect competition" to exist, each seller must view his buyer as a monopsonist, and each buyer must view his seller as a monopolist!

Chamberlin and Robinson do not manage to establish any clarity on the exact number (if quantitative elements are in any way valid) of firms required to create conditions of perfect competition either. It is in fact not possible to determine just where the movement from "small" group competition to "large" group competition takes place, and for this reason the selection of a "number" of firms must perforce be arbitrary and merely illustrative.⁽⁶⁾

Professor Robinson writes:

"We have thus reached the conclusion that there is not one universal value for the 'large number of firms' which ensures perfect competition. In each particular case, with given slopes of the marginal cost curves, there is a certain definite number of firms which will produce competition of an agreed degree of perfection, and this number, in some cases, may be quite small."(7)

(1) Ibid., p. 114.

(2) See earlier discussion.

(3) 'Monopolistic or Imperfect Competition?', p. 270.

(4) 'What is Perfect Competition?', p. 118.

(5) 'Monopolistic or Imperfect Competition?', p. 569, note.

(6) Ibid., p. 569, note.

(7) 'What is Perfect Competition?', p. 118.

In this context Professor Robinson obviously bases her argument on the belief that the Marginal Cost curve is an important determinant of the nature of the competition prevailing within an industry.⁽¹⁾

Setting these basic issues aside for the moment, we may move on to an examination of the broad principles on which The Theory of Monopolistic Competition and The Economics of Imperfect Competition are based. As the study progresses a number of the issues discussed in the present chapter will be raised again and closer inspection of their implications for the overall Theory will be undertaken.

(1) Ibid., p. 118.

CHAPTER II

THE QUESTION OF PRODUCT DIFFERENTIATION

In Chapter IV of The Theory of Monopolistic Competition, Professor Chamberlin provides a discussion on the nature of Product Differentiation. He suggests that

"A General Class of product is differentiated if any significant basis exists for distinguishing the goods (or services) of one seller from those of another. Such a basis may be real or fancied, so long as it is of any importance whatever to buyers, and leads to a preference for one variety of the product over another. Where such differentiation exists, even though it be slight, buyers will be paired with sellers, not by chance and at random (as under pure competition), but according to their preferences."(1)

The significance of this view must be carefully examined. Where the distinctions between products are real, the basis for differentiation might range from purely technical characteristics to the varieties of package in which the item is sold. The fact that consumers differentiate on this basis does not imply that the competing products perform their functions any differently, but may merely reflect the fact that the decision to buy one good as opposed to another, is a subjective one and very frequently defies qualitative or quantitative analysis. At the same time, differentiation by consumers on the basis of intangible factors such as service, reputation or efficiency in the field of retailing, is common and also serves to establish the limited monopolies which characterize conditions of monopolistic competition.

Professor Robinson has written

"... the notion of a perfect market is based on the assumption that the customers who make up the market all react in the same way to differences in the prices charged by different sellers."(2)

At this point the element of price enters the picture. One of the interesting features of the analysis is the fact that where consumers have established preferences for one good over the other, it is possible for individual sellers to charge higher prices than their

(1) The Theory of Monopolistic Competition, p. 56.

(2) The Economics of Imperfect Competition, p. 89.

competitors and still retain customers. However this principle of "loyalty" (or whatever else it may be) will be discussed at a later stage and a number of criticisms of the orthodox approach will emerge.

The views taken by Professor Chamberlin and Professor Robinson on this issue display certain similarities, although they raise questions as to their analytical depth. No longer was the homogeneous grouping of exactly alike commodities possible as under conditions of perfect competition. A new form of product grouping had to replace the old, and the result was a system disclosing

"a number of recognizable commodities
and 'industries' generally one for each
seller."(1)

Professor Chamberlin, in his article 'The Product as an Economic Variable' (2) has come to consider that the new approach to Competition theory has opened up new fields for investigation, particularly in so far as the "product" itself and "advertising" are concerned. An interesting point to emerge from his discussion of these two aspects of monopolistic competition is his view that there is no such thing as a given product selling at a given price. (3) The "Product" itself is subject to constant modification, improvement or even deterioration and the demand for it will be partially a function of these variables, to the extent that

"elasticity of demand in its general sense
of the degree of responsiveness of demand
to a change in price, is evidently applicable
to the product as a variable, where the
question becomes that of the responsiveness
of demand to a change in product."(4)

The argument put forward is that demand for a "product" will be a function of both price and quality when compared with other, but essentially similar, products. At the same time, since "quality" is not necessarily judged objectively, one product might very well be regarded as being "superior" or "inferior" to another purely because the service (or some other intangible feature) which surrounds its sale are different.

Before continuing with this discussion, it would be well to consolidate the issues raised at the beginning of the chapter. We have seen what the term "product differentiation" implies and it is possible to turn now to its implications for "monopoly"

(1) Monopolistic Competition and General Equilibrium Theory, p. 81.

(2) Quarterly Journal of Economics, February 1953.

(3) Ibid., p. 3.

(4) Ibid., p. 4.

and "competition". Since the possibility of distinctions of one sort or another arising amongst a range of essentially similar commodities is very strong, it would appear as if heterogeneity, rather than homogeneity, of product is the predominant market characteristic and that, in effect, all products are differentiated, no matter how slightly. Prior to the presentation of the new theories, economics had attempted to explain this phenomenon with the aid of either the theory of "monopoly" or the theory of "competition" as they then were.

This approach raised a number of problems. The determination of whether a product or service was a "monopoly" or in competition with others was necessarily vague. For example, a patent or a copyright was held to be capable of conferring monopoly powers on the holder, whereas a "trade mark" was not regarded as constituting much of a barrier to the competitive encroachment of other sellers.⁽¹⁾ This way of thinking not only misunderstood the essence of both "monopoly" and "competition" but was largely responsible for the belief that the two market forms opposed each other diagonally, with no chance of being combined in a single body of analysis.

If one considers the case of the patent and trade marks mentioned above, the possibility of breaking down the old dichotomy, as it appeared to Chamberlin, will become fairly clear. There is no doubt that a patent does, to a fairly large extent, confer certain monopoly rights upon its holder. At the same time, however, the fact that one producer is deriving the benefit of such legal protection, generally has the effect of inciting others to achieve the same conditions for themselves, and the very idea that each individual producer is concentrating on a search for a product which will fulfil this function, implies that the element of competitive enterprise will be quite strong. Taken one step further, no patent is likely to be sufficiently **comprehensive** to cover all aspects of a particular field, with the result that, in spite of the existence of such limited "monopolies" as arise from the distribution of patent rights, no individual can be completely barred from entering the field at all. The result of this is that there will, under normal conditions, always be a pressure of competition, potential or otherwise, surrounding each patent holder in a field and product characteristics will, with an increasing "density" of competitors, tend to become increasingly similar, even if they never become exactly the same. Another possibility arises. Even if a producer is far-sighted enough to buy up a

(1) The Theory of Monopolistic Competition, p. 57.

number of patents relating to a field of production, and thereby to ensure a greater degree of isolation from his competitors, there is no reason to believe that the products which he himself would be manufacturing under such right: would not be in competition with one another and would not possibly be very close substitutes. The implication is that the ability of the individual to control his price/output policy for any one or a number of items over which he has control is very much a function of the nature and number of the substitutes available.

Chamberlin also mentions the issues surrounding trade-marks.⁽¹⁾ He points out the distinction which has tended to arise, between trade-marks and patents. In the case of the former, the use of a trade-mark does not give the same control over a process of production as it does with a patent. It definitely does permit a producer to distinguish quite strongly between his product and that of his competitor, but it does not (or so it is sometimes held) give the individual the same power to control price and output as might be the case under the more monopolistic conditions of a patent. Chamberlin indicates that this dichotomy is not strictly valid since:

"Both patents and trade marks may be conceived of as pure monopoly elements of the goods to which they are attached; the competitive elements in both cases are the similarities between these goods and others."⁽²⁾

He bases this argument on the fact that, as we have already seen, patents, particularly single ones, do not give complete control over a field of business and therefore cannot be regarded as conferring "monopoly" powers in the strict sense of the word. Secondly, control is in any case a matter of degree and depends on the elasticity of demand for the product of any one producer. For this reason:

"To neglect either the monopoly element in trade marks or the competitive element in patents by calling the first competitive and the second monopolistic is to push to opposite extremes and to represent as wholly different two things which are, in fact, essentially alike."⁽³⁾

If we examine the reasoning behind Chamberlin's analysis, we may conclude, with him, that monopoly in the strict sense of the

(1) Ibid., p. 59 ff.

(2) Ibid., p. 61.

(3) Ibid., p. 61.

word, implies

"control over the supply of all economic goods."(1)

This would provide the only condition under which there can, by definition, be no competition from substitutes. Pure Competition, on the other hand, implies that all goods constitute perfect substitutes for one another and that the demand curve for the product of each seller is perfectly elastic as a result of such standardization.

"Between the two extremes there are all gradations, but both elements are always present and must always be recognized."(2)

An aspect of the question of "gradations" was discussed in 1929 by H. Hotelling⁽³⁾, in an article dealing with the work of Sraffa.⁽⁴⁾ The point which provided the basis for Hotelling's analysis was

"the feature of actual business ... which does not seem to have been generally taken account of in economic theory ... (is) the existence with reference to each seller of groups of buyers who will deal with him instead of with his competitors in spite of a difference in price."(5)

Professor Chamberlin refers to Hotelling as the single exception to the view that, prior to the publication of The Theory of Monopolistic Competition, no writer had appreciated the need for a notion of "product equilibrium" as well as "price equilibrium", or the idea of "product adjustment for a given price."(6)

Hotelling's argument was that consumers are confronted by a selection of basically similar, but superficially differentiated products. The reason for this, he suggests, lies in the belief held by sellers that there is an inherent risk in moving too far out of line with the general trend, while, at the same time, differentiation of some sort would be desirable to avoid the possibility of a price war. The mathematical processes employed in arriving at this conclusion need not be analysed here, but a rough indication of major points may be provided.

Hotelling believed that the sales made by a seller are a

(1) Ibid., p. 63.

(2) Ibid., p. 63.

(3) 'Stability in Competition', Economic Journal, March 1929.

(4) Economic Journal, 1926.

(5) 'Stability in Competition', p. 44.

(6) The Theory of Monopolistic Competition, p. 73, note.

function of the seller's location along a straight "line", while the aggregate of sales on such a line are constant. Prices for all sellers along this line are uniform and products, except for location, are uniform; competition is based on trading convenience. Under such circumstances, a seller would position himself at any point. Where only two sellers are involved, each seller would position himself as closely as he could to the other, although Hotelling fails to indicate where this "cluster" would materialize.⁽¹⁾ Under these circumstances, customer convenience would not be maximized since no seller caters specifically for buyers located at the quartile points. Working on the principle that

"the market of each extends halfway to
his nearest rival in any direction."⁽²⁾

each seller could increase his sales by moving closer to his competitor. Assuming that the point at which they are closest lies at the centre of the line, both sellers' markets would be equal in size and no one could gain from a further movement. In the case of larger numbers, the analysis becomes slightly more involved. If we assume that two sellers, such as discussed above, are located in the centre of the line, successive sellers would also tend to cluster around the same point, to the extent that, as Hotelling indicates in his conclusion, there will tend to be excessive concentration. The "line" analogy may obviously be applied in the form of "varying density", or spread of "buyers on a plane".⁽³⁾

Professor Chamberlin, in the Appendix C of his The Theory of Monopolistic Competition, as well as in the article 'The Product as an Economic Variable', has pointed out that Hotelling's analysis loses some of its validity as soon as more than two sellers are considered, since a "group" of three or more sellers is not possible. This is so because, were there three sellers, with one lying between the other two, the former would move out of the centre and take up a position at the edge of the group. Since this movement would always have the effect of leaving another seller in between two others, the continuous movement outward would tend to disperse the competitors and the excessive concentration would be unlikely to arise.

A.P. Lerner and H.W. Singer, in 'Some Notes on Duopoly and Spatial Competition'⁽⁴⁾, take up the discussion of Hotelling's

(1) Chamberlin, Quarterly Journal of Economics, 1953, p. 18(5 n). He suggests that this cluster would be in the centre of the line.

(2) Ibid., p. 18.

(3) 'Stability in Competition', p. 55.

(4) Journal of Political Economy, April 1937.

analysis and conclude that

"Hotelling's assertion that sellers will cluster together is only true ... where the cost of transporting a unit of commodity across the whole length of the market is less than the price each consumer is willing to pay for it."(1)

However, there is also criticism of Chamberlin's contention that one seller will always be attempting to move towards the outer edge of a "group" of three. According to Lerner and Singer a

"third arrival will ... go as near as possible to the center, where the previous two are located. One of these will now find himself cut off from the market entirely, having a competitor on either side. He will be squeezed out of his middle position, but if he too considers the location of his competitors as given, he will move just past one of his competitors, imprisoning him in turn. If the movements are infinitesimal, the three producers stay at the center."(2)

Another conclusion reached by the two authors is the fact that there is no tendency for dispersion when sellers are in pairs, particularly when each producer realizes that the location of his competitors is a function of his own position and that, for this reason, he should attain "equilibrium" as soon as he can. Since each seller will attempt to get as close - by virtue of the fact that this will increase his gains - to his competitor as possible (when there are two), there will be a tendency to locate at the end of the line only when there are two sellers - not when there is only one at each end. The net result is, as Chamberlin points out, that

"although 'groups' of sellers may in general consist of either one or two, the end groups must necessarily consist of two sellers."(3)

In his 'Monopolistic Competition Revisited' ⁽⁴⁾, Chamberlin develops the study of space and indicates its importance for Monopolistic Competition theory. He takes up the argument from the point of view of an "abstract" model in which buyers are fairly uniformly spread over a spatial area, sellers are homogeneous except for spatial considerations, all charge the same price initially and attempt to attract customers on the basis of shopping convenience. ⁽⁵⁾ The result would be an even spread of sellers over the given area and the fact that each seller would possess a market built of buyers

(1) Ibid., p. 162

(2) Ibid., p. 178.

(3) Quarterly Journal of Economics, 1953, p. 19.

(4) Economica, 1951.

(5) Ibid., p. 346.

who find his location the most convenient. By lowering price, any individual seller could attract more of the available custom prepared to travel further in order to save on the purchase. By raising price, the seller would lose custom but would retain those not prepared to travel further in order to save. The result is a demand curve of finite elasticity for each seller, in contrast to the infinitely elastic demand curve found under the conditions of "pure" and "perfect" competition. M.A. Copeland⁽¹⁾ produces a similar conclusion that:

"When sellers are selling unbranded goods of identical specifications on identical terms, transportation costs alone are sufficient to give rise to monopolistic competition provided buyers and sellers are distributed somewhat evenly over the map, and buyers outnumber sellers."

The same sort of analysis can be applied to a situation in which two shops are next door to each other, but each selling a different type of branded product.⁽²⁾ These shops will then be differentiated by the conditions within them, e.g. by "spatial separation." The effect of such a situation is to create "concentrations" of population⁽³⁾ around those products, shops etc. which appeal most to public tastes. Producers therefore will endeavour to manufacture products most similar to those which are already popular, and the situation similar to that envisaged by Hotelling arises.

The important issue which arises here, is the question of the nature of the distribution of sellers. In much of the above discussion, it has been assumed that buyers are distributed evenly along the line. The fact that this does not appear to be the case in the real world, would seem to confuse the issue. Where it is held that sellers adjust to the location of buyers, and that these buyers are distributed, not evenly, but in correspondence to the principle of population concentrations, sellers will attempt to cater for those buyers who constitute the biggest concentrations, to the detriment of those who lie on the periphery.

"Evidently, maximum profits do not lie in these areas where the 'population' is thinly distributed."⁽⁴⁾

-
- (1) 'Competing Products and Monopolistic Competition', Quarterly Journal of Economics, November 1940, p. 8.
 - (2) *Ibid.*, p. 347. He cites restaurants as examples.
 - (3) Economica, 1951, p. 347.
 - (4) Quarterly Journal of Economics, 1953, p. 22.

We may now proceed to a more intensive analysis of the position of the "product" in the process of equilibrium. We have briefly touched on the question of product differentiation, and outlined a number of views on the question of space, merely to indicate the nature of the discussion.

In the article 'The Product as an Economic Variable', Professor Chamberlin points out one of the significant differences between "monopolistic" and "pure competition" in so far as their inclusion of important variables is concerned. Where "pure competition" need only be examined in the light of price/quantity relationships, "monopolistic" competition theory must encompass price/quantity and quality relationships. In this matter we have already observed the significance which must be attached to the question of product variation and differentiation. In order to render monopolistic competition theory more valuable for purposes of analysis, Professor Chamberlin provides a number of possible paired relationships in addition to the standard price/quantity variables:⁽¹⁾ (i) Price-quantity (ii) Product-quantity (iii) Advertising-quantity (Advertising here, covering all forms of selling costs)⁽²⁾ (iv) Price-product (v) Price-advertising (vi) Advertising-Product.

At this point, we may briefly examine a few in turn, with the exception of the familiar price-quantity relationship, and those relating to advertising without consideration of the product proper.

Product-quantity: If we take price-quantity relationships as the starting point, and consider the question of elasticity of demand, it becomes clear that under monopolistically competitive conditions demand must be a function not only of price, but also of quality. A product, for example, which lends itself to not easily detectable deterioration by the manufacturer might experience a highly inelastic demand in this respect, since the public is unaware of the fact that such a decline in quality is in fact taking place. On the other hand, if a change in the quality of an article makes itself obvious immediately, the demand for it will bear a close relation to a variable which turns out to be one other than mere price. This issue becomes more important when one considers that it is far easier for a consumer to become aware of a change in price than of a change in quality, and the assumption of perfect knowledge, used so effectively in "pure" and "perfect" competition

(1) Quarterly Journal of Economics, 1953, p. 3.

(2) Ibid., p. 3, note 4.

theory requires modification under the conditions of "monopolistic" competition.

Another question which merits attention, is that of "cut throat" price competition⁽¹⁾. Professor Chamberlin considers the possibility that this type of behaviour may take on a form different from that experienced where prices are cut by competitors to the extent that they lie below costs. Where the product is the major variable, he envisages a situation where competitors struggle to improve their products until the point is reached where costs lie above prices. He also points out that under such conditions, the "product" as a variable may be as eminently quantifiable as any of the other accepted factors in analysis such as price and quantity.

Price- Product: This relationship of price to product is based on the principle that price is likely to be a function of quality and vice-versa. Conventional theory has held that the product is "given" so that price changes can only be considered for such "given" products. As Chamberlin has indicated, however, it may well be that a competitive lowering of prices by different producers will result in a deterioration of product in an effort to push costs down. The knowledge, on the part of customers, that a low price may mean an inferior product (quality-wise) will produce a market situation different from one in which quality considerations are absent and only price is held to be the important variable. For these reasons, price-competition is not readily resorted to by the competing manufacturers who appreciate the possibility that elasticity of demand may increase with a fall in price - simply because consumers become wary.

Advertising-product: Thus far we have paid no attention to the question of "Advertising" or selling costs as such. Reference will be made to it at some length later in this paper, but at this point it is possible to include a brief mention of one aspect of the problem without seriously deviating from the line of discussion. If, for the sake of brevity, we assume that, where prices and products are given, demand will be a function of expenditure on selling, it is easy to understand how another variable '(not found under the theoretical conditions of "pure" competition) must be incorporated into the general body of analysis if the theory is in any way to explain the experiences of the real world. This "other variable", advertising, becomes more important if we assume

(1) Ibid., p. 4.

that the product is not "given" and that a relationship exists between such advertising and the product in question. Chamberlin has pointed out that

"... there is literally no such thing as a given product. Products are actually the most volatile things in the economic system - much more so than prices. To begin with, almost every product has at least a variable element in the circumstances surrounding its sale: convenience of location, peculiarities of shop and environment, personality, service ... etc."(1)

Equilibrium of the firm or industry must be based on an "optimum relationship"⁽²⁾ between the product and advertising in addition to that between other variables. If it is assumed, for example, that price may be held constant, while both the quality and the expenditure on selling are varied, it is likely that quantity sold will be a function of both of these variables to the extent that they may be often regarded as "positively correlated"⁽³⁾. The exact nature of the relationship borne by "product" to advertising has not been fully analysed, but there can be no doubt as to its importance.

L. Abbot⁽⁴⁾ provides an interesting analysis of the question of quality and attempts to develop a theory around it. Taking Chamberlin's observation that

"...no two individuals are either identical in tastes or identically situated relative to their environment ...(and)... we might by analogy regard buyers as distributed along symbolical lines in multi-dimensional space with respect to other aspects of the product."⁽⁵⁾

he suggests that people possess "basic" and "derived" wants.⁽⁶⁾ "Basic" wants may be regarded as the fundamental want for an experience, while "derived" wants are those for a product which the individual believes can satisfy the "basic" want. The theory is based on the belief that basic wants are a function of the individual's tastes, values and circumstances, and that there must be an "optimum attainable variety of product"⁽⁷⁾ which, if it

(1) Ibid., pp. 8-9.

(2) Ibid., p. 7.

(3) Ibid., p. 7. He also points out, however, that "advertising is often used to maintain sales volume in the face of quality deterioration". (p. 7).

(4) L. Abbot, Quality and Competition, Columbia University Press, N.Y., 1955.

(5) Quarterly Journal of Economics, 1953, pp. 11-12.

(6) Abbot, loc. cit., p. 40.

(7) Ibid., p. 75.

were produced, would be able to satisfy wants exactly. Demand for products can be created either through increasing selling expenditure, or altering the product itself, while producers will not endeavour to copy the products of competitors, but will rather adopt what they believe to be superior aspects for incorporation into their own products.

In addition to these characteristics, Abbot suggests that his theory introduces certain distinctions between itself and the "current theory of competitive markets"⁽¹⁾, since the latter has provided a "valueless"⁽²⁾ concept of an "industry"⁽³⁾. However, as he points out, if one accepts the notion of basic wants, a group of products may be considered capable of achieving specific ends, and may legitimately be considered constituents of the same industry⁽⁴⁾. There is no need at this stage to elaborate on Abbot's "distinctions". Suffice it to mention a few of his conclusions:

- (a) "Socially useful entrepreneurial activity"⁽⁵⁾ must include attempts to inform buyers about the nature of available products, as well as to adapt products to wants.
- (b) "Product heterogeneity, variation and advertising"⁽⁶⁾ are indispensable in the attainment of competitive equilibrium.
- (c) Advertising is no alternative to changes in price, i.e. a reduction in the latter affects those already familiar with the product, while an increase in expenditure on the former attracts new customers.

We have already mentioned the concept of the "group" or "industry", and the significance of the question of "substitutability". Where the principle of "product differentiation" occupies so important a part of the analysis, and where a number of producers are held to be in competition with one another, the exact nature of the "product" in question must be specified. For example, a motor car of make A may be regarded as being in "competition" with a motor car of make B, but it is also possible that, in so

(1) Ibid., p. 80

(2) Ibid., p. 81.

(3) The question of the "industry" is discussed below.

(4) Abbot, loc. cit., p. 82.

(5) Ibid., p. 205.

(6) Ibid., p. 205.

far as the consumer's money is concerned, both makes might be in competition with a bicycle. It is the problem of defining the outer limits of the "group" which has confronted theorists since the introduction of the works on monopolistic competition, and the problem of adequately classifying a wide range of products into the "pigeonholes" of competing or non-competing goods is not easily solved.

Professor Robinson defines an "industry" as

"...any group of firms producing a single commodity...bounded on all sides by a marked gap between itself and its closest substitutes."(1)

This definition provides a view of her attitudes towards both "industries" and "commodities" and indicates the important relationship between the two.

Professor Chamberlin appears to have been more appreciative of the problems which beset the definition of a "group" (which, at this stage, may be regarded as a classification of similar purpose to Professor Robinson's "industry").(2) His definition is naturally based on the view that there may exist a number of producers, each selling a similar, but slightly differentiated product, and therefore constituting monopolies unto themselves, in spite of the fact that they are not entirely isolated from their competitors as would be the case under conditions of pure monopoly. The very fact, however, that no products are exactly alike - whether the distinctions drawn by the customers are based on sound objective judgement (rationality) or merely on a vague, subjective impulse (irrationality) - means that it is highly unlikely that any two producers will experience the same conditions of cost and demand. For this reason, the term "group" of competing producers may be used to cover those producers who manufacture products lying within sets of "price classes", even if technical similarities are non-existent.(3)

"...A group may be large or small, depending upon the degree of generality given to the classification..."(4)

Triffin⁽⁵⁾ has pointed out that neither Chamberlin nor Robinson

(1) The Economics of Imperfect Competition, p. 17.

(2) The Theory of Monopolistic Competition, p. 81 ff.

(3) *Ibid.*, p. 103.

(4) *Ibid.*, p. 103.

(5) Monopolistic Competition and General Equilibrium Theory, p. 67.

discuss the relationships which exist between groups, and confine their analysis to the equilibrium of the firm and industry without considering the possibility of establishing general equilibrium. We have already discussed Triffin's views of Professor Robinson's sales curve. He points out⁽¹⁾ the inherent difficulty of determining the extent of the "gap" lying between a product and its substitutes, and suggests that Mr Kaldor's⁽²⁾ view on the subject constitutes appropriate criticism. Kaldor has pointed out that the "gap" will be different for different producers as well as for different substitutes. Some substitutes, for example, will be close to or "further away" from a particular good, and the degree of competitiveness or substitutability will naturally be a function of this "distance".

Chamberlin's attitude would appear to elicit more approval from Triffin, although he suggests that Professor Robinson's view possesses a measure of analytical value.⁽³⁾ The main point which arises, however, is that where there exists differentiation amongst products, this form of competition can no longer be analysed along the lines of homogeneous infinitely elastic substitutes. At the same time, Triffin points out that

"Monopolistic competition robs the old concept of industry (and also the Chamberlinian group) of any theoretical significance. As soon as the elasticity of substitution between two products is recognized as imperfect, their sellers can pursue independent price policies."⁽⁴⁾

This argument is based on the belief (fashioned on a "mixture" of Chamberlinian and Robinsonian reasoning, but producing an entirely different conclusion) that all "products" compete in one way or another, to either a greater or a lesser extent, for the income of the consumer, and there is little to be derived from the fact that it is easier to group certain products on the basis of technical similarity than it is others.

"...when competition is discussed in general abstract terms, we may just as well make the group (or industry) co-extensive with the whole economic collectivity. The problems are the same and the collectivity is no greater."⁽⁵⁾

(1) Triffin, loc. cit., p. 83.

(2) 'Mrs Robinson's Economics of Imperfect Competition', Economica August 1934, pp. 339-340.

(3) Triffin, loc. cit., p. 84 ff.

(4) Ibid., p. 88.

(5) Ibid., p. 88.

In order to provide a more adequate explanation of the question of the interrelationships between firms, Triffin begins with Chamberlin's distinction between "large" and "small" groups.⁽¹⁾

The group may be regarded as being large if

"... any adjustment of price or of 'product' by a single producer spreads its influence over so many of his competitors that the impact felt by any one is negligible and does not lead him to any readjustment of his own situation."⁽²⁾

He then proceeds to determine the degree of competition prevailing by examining the effect on Total Revenue and price of the competing firms if any of their number should change his. He also considers the possibility that one firm may be more affected by a change in the price/output policy of one of its competitors than that competitor would be were the same firm to change its price/output policy. Whilst it is not necessary to analyse in detail Triffin's technique, suffice it to say that it led to a revision of Chamberlin's "large group" case and produced a

"single coefficient ... to distinguish systematically between the various types of market interdependence."⁽³⁾

The coefficient, the value of which is $\frac{p_1 dq_2}{q_2 dp_1}$, is a partial derivative, in elasticity form, in which p refers to price and q to demand or sales quantities. Subscripts 1 and 2 refer to the firms, which are regarded as separate. If the coefficient equals zero, there is no relationship (in the form of interdependence) between the firms. If this is the case, it may be accepted that, should firm 1 alter its price/output policy, firm 2 will not react since its own sales will remain unaffected. In such a case, firm 1 may be regarded as an isolated seller as far as firm 2 is concerned. As soon as the coefficient becomes finite, firms 1 and 2 are heterogeneous competitors, and when it tends towards infinity, the competitors may be called homogeneous. Where the coefficient is negative, the goods which the firms are selling are heterogeneous complements.

"To find the value of the coefficient, the effects of a fall in p_1 , on q_2 , q_3 and q_4 ... are observed. Finally, it is made explicit that, while p_1 varies, p_2 , p_3 , p_4 ... remain constant."⁽⁴⁾

(1) Ibid., p. 100

(2) The Theory of Monopolistic Competition, p. 83.

(3) Triffin, loc. cit., p. 141.

(4) S. Weintraub: 'The Classification of Market Positions: Comment', Quarterly Journal of Economics, August 1942, p. 666.

We must accept the proposition⁽¹⁾ that Triffin's "heterogeneous competition" conveys the same meaning as Professor Chamberlin's "Monopolistic Competition" and Professor Robinson's "Imperfect Competition". "Homogeneous Competition" can be equated with "Pure Competition".⁽²⁾

In this matter Weintraub's article proposes that the classification procedure might be simplified a good deal by merely examining the effects of a fall in p_1 on the ratio $\frac{dq_2}{q_2}$. This ratio, which he refers to as the "quantity ratio"⁽³⁾, he proposes should replace the Triffin "coefficient". He points out that, for example, in the case of Homogeneous Competition a value of minus 1 would appear, since the full demand for the output of firm 2 would have been transferred to firm 1.⁽⁴⁾ Similarly, for Heterogeneous Competition the yield would lie between zero and minus 1, and for Heterogeneous Complementarity, the result would be positive and less than unity. If p_1 rises, the situation becomes slightly more complex, but detailed analysis is not required here.

Weintraub also points out in his article that Triffin's assumption of constant prices only applies to conditions of isolated selling⁽⁵⁾ and in a few other cases, but that, in the main, it is an "unnecessary, restrictive anachronism"⁽⁶⁾. In his 'Reply', Triffin suggests that this question of interdependence of price only arises in the case of oligopoly, but that in most other cases, firm 1 can safely consider $p_2, p_3 \dots$ as "parameters, independent of its own actions."⁽⁷⁾ Under conditions of oligopoly, the Marshallian demand curve can obviously not be used.

Weintraub's final major criticism of Triffin is the suggestion that the latter's coefficient produces little more of value than the traditional technique of examining demand elasticity. This however, is not so, since, as Triffin points out⁽⁸⁾, the measurement of the simple elasticity of demand cannot distinguish effectively

(1) Triffin, loc. cit., p. 103.

(2) Weintraub, loc. cit., p. 666.

(3) Ibid., p. 667, note 6.

(4) Ibid., p. 667.

(5) Ibid., p. 668.

(6) Ibid., p. 669.

(7) Quarterly Journal of Economics, August 1942, p. 674 ff.

(8) Ibid., p. 676.

over a range of competitive relationships, such as oligopoly and Monopolistic Competition, but rather, is only able to discern the two market situations of traditional theory: Monopoly and Pure Competition.

There has, however, since the publication of the articles of Triffin and Weintraub, been a certain amount of discussion on the validity of Triffin's assumptions regarding the "industry" or "group".

Andreas G. Papandreou, in his article entitled 'Market Structure and Monopoly Power'⁽¹⁾, points out that Triffin's coefficient is confusing, in that since

"... in a purely competitive situation, the cross-elasticity of demand for the product of the firm i in terms of price of the product of firm j becomes zero, in terms of actual or realizable changes in the volume of firm i's sales. On these grounds, however, we should consider every pure competitor as being a pure monopolist! It seems impossible ... to distinguish between pure competition and pure monopoly on the basis of Dr Triffin's criterion."⁽²⁾

In order to provide a basis for his analysis, Papandreou points out the necessity for having some definition of a "group" or "industry", if only to obtain a criterion for empirical investigation. To this end, he suggests that:

"Our group-centred industry concept is defined to include all the firms which compete in selling with one another ... The group must in fact fulfil two conditions: (a) any two firms in the group must compete and (b) no firm must be left out of the group if it competes with all the firms in it."⁽³⁾

Theodore Morgan's article 'A Measure of Monopoly in Selling'⁽⁴⁾, provides a coefficient indicating the extent of a firm's isolation from the competitive process, and expresses this in terms of the relative size of the firm and the substitutability of the product of that firm and the products of its competitors. The insulation is a function of an increase in the former and a decrease in the latter, and can be used to obtain an idea of the relevant "group" cohesion.

(1) American Economic Review, September 1949.

(2) Ibid., p. 889.

(3) Ibid., p. 887.

(4) Quarterly Journal of Economics, May 1946, p. 461.

Bain⁽¹⁾ has written that the rate of excess profit found in a firm will determine the extent of its monopoly powers. This excess profit he considers to arise from "a discrepancy between price and average cost"⁽²⁾, while he suggests that

"...a monopoly is conventionally defined as a situation involving a discrepancy between price and marginal cost."⁽³⁾

The value of his analysis can be seen quite readily if one considers his "three sources of excess profits": (a) a lack of freedom of entry (b) monopoly in the selling market, and (c) monopoly in the buying market.⁽⁴⁾ In order to provide a suitable working definition of monopoly profits, Bain finds it necessary to bring in the principle of future rents thus:

"The rate of profit is ... that rate which, when used in discounting the future rents of the enterprise, equates their capital value to the cost of those assets which would be held by the firm if it produced its present output in competitive equilibrium."

The value of this procedure of analysis is to indicate fairly accurately the extent of the competition prevailing in an "industry" or "group" on the basis of the nature of the profits being made by firms in it. This is obviously an entirely different method of estimating the degree of substitutability between products and does not require the use of the elasticity coefficient as is the case above.

Two older approaches which merit consideration are those of P.M. Sweezy and A.P. Lerner.

In an article entitled 'On the Definition of Monopoly'⁽⁵⁾ Paul Sweezy suggests that a seller could be called a monopolist if the demand curve for his product is not dependent upon either its price or the profit or loss he experiences. The significance of the first criterion is obvious, in that an inelastic demand curve would be necessary, while in the second case profits, no matter how large, made by the seller must, of necessity, have no influence on the plans of potential competitors. This, according to Sweezy, will provide suitable conditions of isolation for the seller and he may then be termed a "monopolist".

(1) Joe S. Bain, 'The Profit Rate as a Measure of Monopoly Power', Quarterly Journal of Economics, February 1941, p. 271.

(2) Ibid., p. 273.

(3) Ibid., p. 273.

(4) Ibid., p. 273.

(5) Quarterly Journal of Economics, February 1937, p. 362.

Sweezy proceeds on this basis. Should the price criterion be fulfilled, while, at the same time, the profit criterion is not, i.e. where profits do provide some sort of incentive to potential competitors to offer or withdraw substitutes, the situation would, according to the author, display characteristics similar to Chamberlin's "Monopolistic Competition". On the other hand, where the position is reversed, i.e. where the profit criterion is fulfilled, but the price is not, a situation similar to Chamberlin's "oligopoly" arises. From the above, it will be readily observed that, should, at any one moment in time, either one or both of the criteria not be fulfilled, the question of monopoly must be set aside and the issue of group "equilibrium" brought to the fore. Should the demand curve prove to be independent of neither of the two variables simultaneously, Sweezy has suggested that the situation would correspond to Chamberlin's "monopolistic competition with oligopoly".⁽¹⁾

A.P. Lerner, in his article 'The Concept of Monopoly and the Measurement of Monopoly Power'⁽²⁾ suggests that monopoly power can be detected by examining the divergence between marginal costs and average revenue, through the use of the formula: $\frac{P-C}{P}$ where P = price and C = marginal cost. The use of this formula will provide an index of monopoly power. It is essentially a formulation of Mrs Robinson's proposals (see above).

In an article by J.S. Bain⁽³⁾ the writer indicates that the prevailing system of market classification i.e. that developed by Chamberlin, Robinson and Hicks is unsatisfactory, in that it is

"...based upon a rather sketchy and incomplete group of genuine empirical generalizations."⁽⁴⁾

The result of this has been an over-simplification of real conditions and severe limitation of the capacity of the generalizations to be empirically verified. One of his primary criticisms is the fact that, in the work of Professor Robinson, a given demand curve is assumed and estimates as to price and output are made from it. This he suggests is fallacious reasoning, since in fact,

(1) Ibid., p. 363.

(2) Review of Economic Studies, 1933-34.

(3) 'Market Classifications in Modern Price Theory', Quarterly Journal of Economics, August 1942.

(4) Ibid., p. 561.

Demand curves cannot be ascertained *ex ante*, and therefore have no empirical validity. Naturally, the usefulness of the curve is reduced even more by the treatment (which we have already examined) which Professor Robinson accords the question of interdependence. The high level of subjective estimation embodied in the Robinsonian Demand curve leaves, according to Bain, the entire analysis devoid of any empirical content.⁽¹⁾

Chamberlin's contribution, however, would seem to be of greater empirical value.⁽²⁾ Bain indicates that Chamberlin does not commence his analysis with a "given" Demand curve, but selects rather

"certain direct empirical generalizations, all elements of which are susceptible to easy practical ascertainment."⁽³⁾

The generalizations here are those relating to the

"effect of associated price behaviour of the number of sellers in a 'market' and of the degree of differentiation of the product within a 'market'".⁽⁴⁾

At the same time, Bain points out that Chamberlin's empirical observations regarding the fact that various markets display differing characteristics both in products and prices, are not very advanced. An important omission from the work of Chamberlin, it would appear, is the fact that the latter has failed to consider market characteristics other than numbers and differentiation, and his market classification, therefore, lacks the detail necessary "for further theorizing"⁽⁵⁾. On the basis of

"... such significant market characteristics as number of sellers, differentiation of product, durability of good, importance of product-variation, number of buyers, and consumers' or producers' good"⁽⁶⁾,

Bain constructs a more complex classification of market positions:⁽⁷⁾

(1) Ibid., p. 564.

(2) Ibid., p. 565.

(3) Ibid., p. 565.

(4) Ibid., p. 565.

(5) Ibid., p. 568.

(6) Ibid., p. 569.

(7) Ibid., p. 573.

I Few Sellers

- A) Producer's goods; product variation unimportant.
 - 1. Durable
 - a) Differentiated in important degree.
 - i) Many buyers.
 - ii) Few buyers.
 - b) Undifferentiated or only slightly differentiated.
 - i) Many buyers.
 - ii) Few buyers.
 - 2. Non durable; only slightly differentiated.
 - a) Many buyers.
 - b) Few buyers.
- B) Consumer's goods; many buyers.
 - 1. Differentiated.
 - a) Durable.
 - i) Product variation important.
 - ii) Product variation unimportant.
 - b) Non-durable; product variation unimportant.
 - 2. Non-differentiated; non-durable; product variation unimportant.

II Many Sellers

- A) Producer's goods; slightly differentiated; product variation unimportant; non durable.
 - 1. Many buyers.
 - 2. Few buyers.
- B) Consumer's goods; many buyers; differentiated in important degree.
 - 1. Durable; product variation important.
 - 2. Non durable; product variation unimportant.

CHAPTER III

We may now turn to an examination of the question of "equilibrium". Since much of the theory of Monopolistic Competition rotates around this point, the discussion should, for purposes of clarity, be divided into two parts: the equilibrium of the individual firm and the equilibrium of the group or industry as orthodox Chamberlinian and Robinsonian analysis came to view it.

The Firm: In the initial pages of The Theory of Monopolistic Competition⁽¹⁾, Chamberlin takes care to point out that "equilibrium" must be distinguished from the equation of Supply and Demand, for the simple reason that the latter indicates only the point at which demand and supply are equal and not why that point in particular should be chosen. The curves are drawn on the assumption that they would represent the quantities bought and sold if certain prices prevailed, but fail to indicate why these prices should prevail.

Chamberlin provides the example of a monopolist, faced with Supply and Demand curves which intersect (and therefore, obviously, achieve a point of "equation"), who chooses, in view of his market position (characterized by a lack of rivals who might possibly undercut him), to charge a price higher than this point would seem to warrant, since this would maximize his total profit.⁽²⁾ Whilst the curves do not intersect at this higher price point, the seller might still be regarded as being in "equilibrium" (since he is maximizing his total profit) and the Demand and Supply curves may still be regarded as being equated but at a lower price. Since it is likely that any slight deviation from the monopoly price will be countered by a tendency to return, the argument of "equilibrium" is reinforced. Since the Demand curve in this case is also the Average Revenue curve, the illustration might be refined by the use of an additional example. If we imagine the curve of Marginal Revenue under the Demand curve, the total revenue from the sale of a given quantity of goods will be indicated by the relevant area under the Marginal Revenue curve. This total revenue will be "maximized" at the point of equilibrium mentioned above, since any increment in output after this production position will add more to costs than to revenue.

Since the brief analysis above may also be applied to conditions of perfect competition, it will be readily appreciated that only

(1) p. 12 ff.

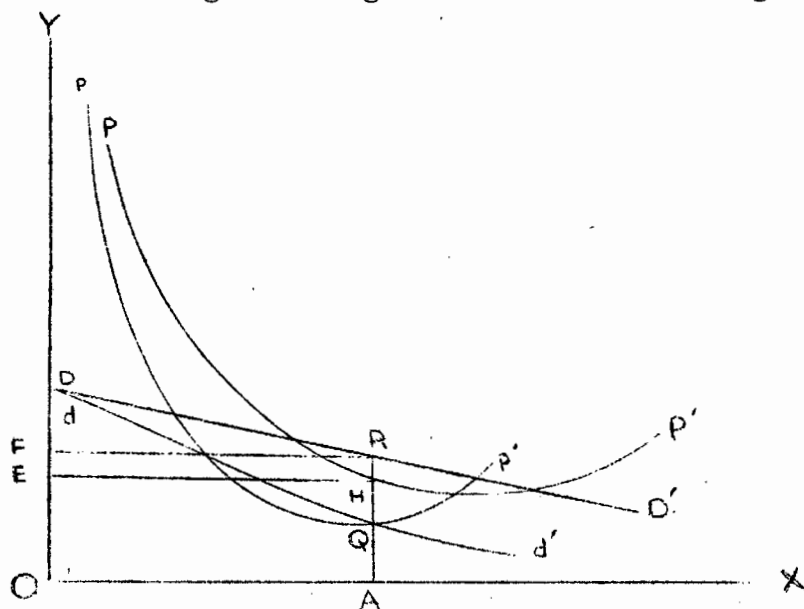
(2) p. 13.

under such conditions can the point of "equilibrium" correspond to the price at which demand and supply are equated.

Chamberlin proceeds to consider the possibility that individual equilibrium may be achieved through the adjustment of either "price" or "product" or both simultaneously⁽¹⁾ In the case of a set price, unalterable on the part of the seller for any number of reasons such as convention, trade practice, resale price maintenance (in the case of a retailer), the individual equilibrium will have to be attained through adjustment of the product e.g. superficial quality changes or changes in the fundamental nature of the article itself. Conversely, if the "product" itself is not easily varied, adjustment will have to be in the form of price changes.

Let us first consider the case in which the "product" is given and prices are variable.

An assumption which must be made is that conditions regarding all substitute goods are given. In the following diagram (2)



DD' and PP' respectively represent the Demand and Cost curves for a single seller. In this context the Cost curve indicates the economies of large scale production by falling to a minimum point and then rising. The principle is that, where output is small, unit costs of production will be high. As output increases such costs will fall to a point, subsequent to which they will rise as certain diseconomies such as, for example, overcomplexity, arise. PP' must either be intersected by the Demand curve at two points, or be at a tangent to it. If it lay above it at all points, Average Costs would exceed Average Revenue for any output; consequently,

(1) p. 74.

(2) Ibid., p. 75.

production of the good would be uneconomic. It is assumed that the relative positions of the curves are as indicated in the diagram. The Average Revenue curve itself slopes downward from left to right, since it is assumed under conditions of monopolistic competition that the presence of fairly close substitutes will induce a shift of customers away from a seller should he raise his price, and towards him should he lower it. He will, however, not lose all his customers with a moderate price change, nor will he gain all those of his competitors, since buyers establish extra-economic preferences for dealing with specific sellers. The nature of these will be discussed at a later stage, but attention has already been briefly given to the shape of the demand curve.

The curve DD' lies below PP' to the left because the existence of substitutes as well as other factors means that demand will decrease to zero at a certain price, and the fact that costs of one sort or another (fixed, variable or risk) have always to be covered, no matter what the scale of production, means that the curve PP' will meet the y axis at infinity. It will lie below it to the right because eventually demand must fall to zero, while costs will inevitably be rising, after the nadir of the curve PP' has been reached.

Using Chamberlin's notations and assuming that the curve PP' includes, at every point, "minimum profit necessary to secure the entrepreneur's services"⁽¹⁾, the ultimate price charged by the seller will be AR , since at this point, the area of profit $EHRF$ is a maximum. Consequently, the output sold will be OA . If DD' and PP' were at a tangent to one another, the only price which would not result in a loss for the seller is AR , in which case, the output would be OA . The matter may be put in another way, in that,

"... the point of maximum profit may also be defined with reference to curves of marginal costs and marginal revenue."⁽²⁾

In the diagram above, these are represented by pp' and dd' respectively. Production will be carried up to the point OA where these two curves intersect, since after this, increments of output will add more to costs than to revenue. The relevant price will be dictated by the point where the extended perpendicular AQ cuts the Average Revenue curve in this case at R , so that the price is AR .

(1) Ibid., p. 77.

(2) Ibid., p. 77

According to Triffin

"...the whole behaviour of the producer is assumed to be directed towards the maximization of his monetary profit i.e. of the positive difference between his revenue and his costs... Corresponding to each level of output (x), there exists a minimum total cost $C(x)$ and a maximum total revenue $R(x)$, the difference between which constitutes the firm's profit $\pi(x)$ ".(1)

Let us now examine a situation in which price is given and the "product" is the variable element. The value of such analysis will become evident when the discussion of retailing arises, since the variation of the product under such circumstances is a common phenomenon. Where, as has already been observed, the variation of price by a seller has no impact on the cost of production curve, PP' may be assumed to be unchanged. However, variation of the product may be generally considered to cause a shift in the position of the cost curve, since changes are frequently of a qualitative nature requiring increased expenditure on design, raw materials, equipment, etc. The net result is that

"...the problem becomes that of selecting a 'product' whose cost and whose market allow the largest total profit, price being given."(2)

Further, the fact that "product" changes are basically qualitative means that graphical representation is more difficult than is the case where price changes only are being considered, and it is necessary to provide a number of diagrams, each of which will refer to a variety of the "product".

Chamberlin has devised a system which will serve our

-
- (1) Monopolistic Competition and General Equilibrium Theory, p. 20. Further: "the firm chooses the level of output that maximizes:

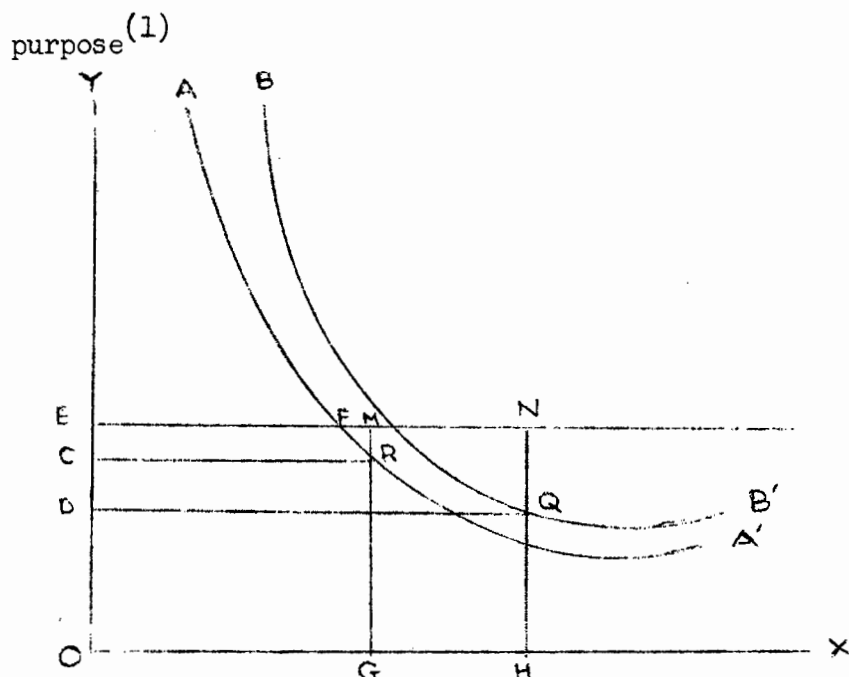
$$\pi = R(x) - C(x)$$

Putting the first derivative of π with relation to $x = 0$, we get the necessary condition:

$$\frac{d\pi}{dx} = \frac{dR}{dx} - \frac{dC}{dx} = 0 \quad \text{or} \quad \frac{dR}{dx} = \frac{dC}{dx}$$

or marginal revenue = ~~m~~arginal cost."

- (2) The Theory of Monopolistic Competition, p. 78.



If we take OE as the fixed price, and consider only two varieties of the product, called, in this case, A and B (and depicted simultaneously on the diagram), with the Cost of Production curve of each represented by AA' and BB' respectively, the amount of A demanded (at price OE) will be OG, while the amount of B demanded (at the same fixed price) will be OH. For product variety A, total profits will be CRME and total costs OGRC. Similarly, for variety B, total profits will be DQNE and total costs will be OHQD. Chamberlin points out in this connection, that EN must not be considered a demand line "indicating indefinitely large demand at the price OE"⁽²⁾. Each variety of product will experience a limited demand dependent upon the nature and price of the product in question, as well as those of substitutes. There is then, no possibility of moving along a Cost curve in order to find the optimum output determined by "profitability"; movement is only possible from one curve, say AA', to another, BB', since this will imply a change in the nature of the product while output in each case remains strictly defined. In the case above, variety B would appear to be a superior choice, since, although its Cost curve lies higher than that for variety A, profits are larger. Demand, it should also be pointed out, is not the sole criterion for judging the "superiority" of one variety over the other, since it is only a valuable concept when relative costs of production have been taken into consideration.

Both diagrams may now be combined in order to indicate the optimum combination of price and product which will produce the largest total profit.

(1) Ibid., p. 79

(2) Ibid., p. 79.

There is no need to consider Professor Robinson's approach to the problem of determining the equilibrium of the individual firm, since it is essentially similar to Professor Chamberlin's in many parts, and of those areas where there is difference of approach, opinion or terminology, the distinctions have already been pointed out in some detail.⁽¹⁾ In this regard, Professor Chamberlin's approach may be taken as being adequately representative of the trend of analysis followed by the two authors.

The Group: We have already examined the nature of the "group" or "industry"⁽²⁾. If, for purposes of analysis, we accept the view that such a "group" or "industry" is made up of a number of competing producers, each selling a product for which there are a number of substitutes, we can proceed to study the nature and causes of "competitive equilibrium"⁽³⁾ or, as Professor Chamberlin calls it, group equilibrium.⁽⁴⁾ As is the case with the attainment of individual equilibrium, the requirement is essentially an adjustment of prices and products. As Chamberlin has suggested,

"...exposition of the group theory is facilitated by ignoring (the lack of uniformity in the imperfection of competition in the sense that 'differentiation ... is not distributed homogeneously among all of the products which are grouped together' (5))...for the present."⁽⁶⁾

For this reason, it will be necessary to assume, initially at any rate, that there is a uniformity of cost and demand curves for all firms in the group⁽⁷⁾, and also, that, consumers' preferences are distributed evenly amongst the competing products.⁽⁸⁾ At the same time the question of "numbers" arises. If the group is small, oligopoly or duopoly problems arise, which are not entirely related to monopolistic competition of the large group variety. The

(1) See Chapter I, above.

(2) See above.

(3) Robinson, The Economics of Imperfect Competition, Book III, Chapter 6.

(4) The Theory of Monopolistic Competition, p. 81

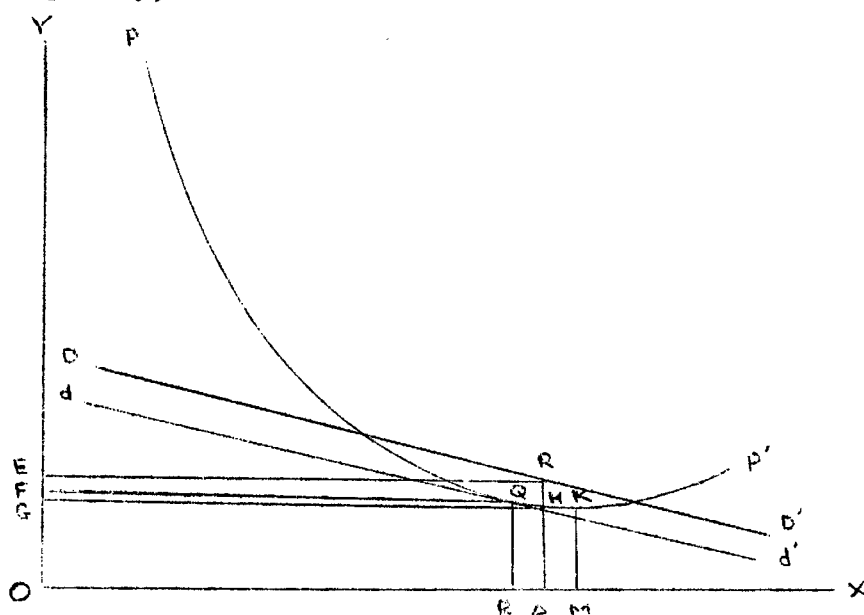
(5) Ibid., p. 82.

(6) Ibid., p. 82.

(7) Ibid., p. 82: Chamberlin refers to this as an heroic assumption. We shall return to the issue at a later stage.

(8) Ibid., p. 83. Chamberlin suggests that this condition might apply to the "fairly even geographical distribution of small retail establishments in the outlying districts of a city."

distinction lies largely in the fact that, under conditions of oligopoly, it must be assumed that the decisions of any one seller are very likely to affect those of his competitors. Where large numbers of competitors are involved however, the influence of any one seller on his rivals may be regarded as negligible, since the effects of his adjustment of price or product are spread over many competitors, so that his decisions will not induce a reaction on the part of his competitors. In the present case, therefore, we will examine first the large group problem. As was the procedure in the examination of individual equilibrium, we will observe the position when price is adjusted with "product" constant, and, subsequently, the reverse situation.



If we imagine that the above⁽¹⁾ diagram represents the Cost and Demand curves experienced by each competing monopolist in the group, PP' and DD' will denote such curves respectively, and the price charged by each seller will be AR , since under such conditions the profits $GHRE$ are at a maximum. Whilst each would be able to lower his price below AR without necessarily incurring a loss, no one is inclined to do so, since the loss of total revenue would not be compensated for by the increased volume of sales. The fact that the individual sellers are enjoying excess profits is likely to induce more competitors to enter the industry, with the result that the Demand curves will definitely, and the Cost curves will possibly, shift. Since the Demand curve is also the Average Revenue curve, the phenomenon is easily explicable. As new firms enter the industry, the volume of trade will now be spread over an increasing number of competitors, with the result that the demand per seller will decrease, along, implicitly therefore, with his Average Revenue.

(1) Ibid., p. 84

The Demand curve will shift downwards to the left, while, at the same time, continuous adjustments of price will be made in such a way as to ensure that the profit area (formerly GHRE) is always a maximum. This excess profit will ultimately disappear entirely, once the pressures created by the increasing number of competitors has forced the Demand curve down to a position of tangency with the Average Cost curve. The price will be BQ and the demand curve dd' at this latter point. Had the Demand curve lain below and to the left of dd', there would have been an eflux of firms from the industry, since none would have been covering costs with revenue, and the result would have also been a tangency "solution" at BQ.

At this point of equilibrium then, the cost of production will be equal to price and, since any seller will lose by raising or lowering his price, the position is stable. Since also, there are no excess profits being made, no further competitors will enter the industry, while, because normal profits are being experienced, no sellers will be inclined to leave.

Chamberlin introduces a brief discussion on costs⁽¹⁾, in which he suggests that, with an influx of competitors, it is possible that costs of production (owing perhaps to an increase in the prices of certain productive factors) will rise, or alternatively - with an improvement in external economics - might fall. A third alternative is that such costs could remain constant owing to a cancellation of the advantages with disadvantages above, or as a result of an absence of any of these tendencies. The existence of any one of these trends would result in either increasing, decreasing or constant costs respectively, and it is the latter case which has been implicit in the above diagrams. Chamberlin has indicated that there is a certain validity in assuming conditions of constant costs, since

"1) the theory in this form is widely applicable to the facts and 2) where it is not applicable, its extension to cover cases of increasing and decreasing cost for the group is easily made." (2)

The first argument is based on the belief that, where competitors in an industry are so numerous as to render the influence of each on the total output negligible, it is highly probable that the influence of each on total costs will also be negligible. This assumption is reinforced by the possibility that the proportion of specific resources used by a particular industry might be small

(1) Ibid., p. 85.

(2) Ibid., p. 85.

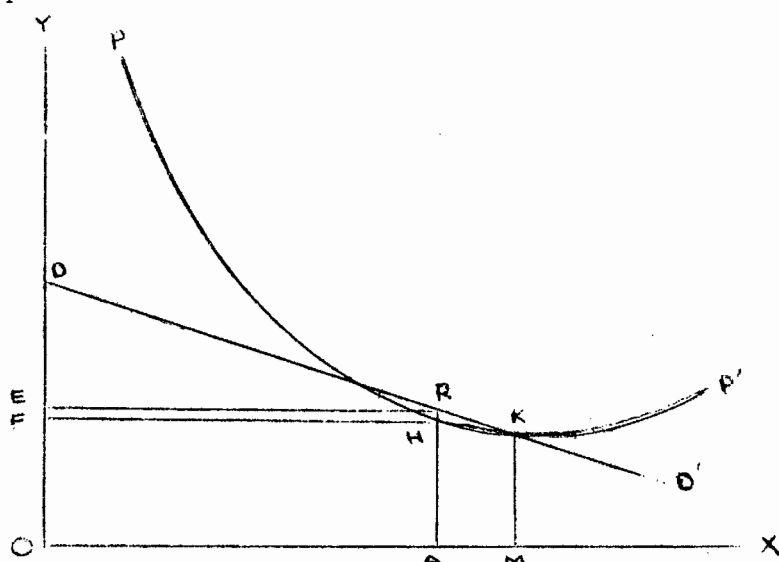
compared with the total of such resources, so that changes in the quantity employed by the former are unlikely to affect the general price level of the latter.⁽¹⁾ Where diminishing costs - resulting from economies - are concerned, Chamberlin points out that a similar difficulty of relative size arises.⁽²⁾ If the industry is small compared to the larger field, it is unlikely that an improvement in the organization of resources as output increases will appreciably affect the nature of the Cost curve facing the group. At the same time, it is also extremely likely that, as has been suggested above, the economies and diseconomies resulting from a larger scale of production will indeed cancel out and the result will be a situation of constant costs.⁽³⁾

Should the necessity to consider cases of increasing or decreasing costs arise, however, Chamberlin suggests that the procedure would merely entail raising or lowering the entire Cost curve for the industry and establishing equilibrium at the higher or lower point - wherever appropriate.

An issue of major importance which arises from the outline of monopolistically competitive behaviour provided above, is the fact that, owing to the slope of the Demand curve, it will never be possible for it to attain a position of tangency with the lowest point on the Average Cost curve. The implication is that, under conditions of monopolistic competition, price will always be higher, and output always smaller, than under perfect competition. The reason is that a position of maximum profits will, where the Average Revenue curve is relatively inelastic, be reached where output lies to the left of the point of minimum average costs.

-
- (1) Ibid., p. 85. He writes: "An increase in the manufacture of of scissors will not appreciably affect the price of steel."
 - (2) Ibid., p. 86.
 - (3) Ibid., p. 87. He provides the example of the automobile industry, where costs increase with increased output and fall with organizational improvements.

In the diagram below⁽¹⁾, a reduction in price from AR to MK, by one seller, would result in an increase in sales from OA to OM, and it may be thought likely that such an action will eventually be undertaken by all. Such a move however, would prove undesirable, since, although the output OM would provide the most efficient scale of production, any one seller could obtain higher profits at price AR where FHRE would be at a maximum.



Triffin has pointed out that the entire problem of group equilibrium may effectively be set aside if one assumes that the group be closed - that is to say, where it is not possible for a firm either to enter or leave the industry⁽²⁾. This would obviously be a position contrary to the one we have been assuming above i.e. one in which freedom of entry and exit exists to the extent that all competitors, potential or otherwise, are able to compete on the same basis of costs and revenue. Turning briefly to an examination of the case in which entry (as opposed to the group) is closed, Professor Chamberlin would conclude that the analysis must assume that entry is closed, while exit is possible.⁽³⁾ The result would be that the AR curve would generally tend to lie above the Average Cost curve and equilibrium would be "compatible with any amount of positive profits"⁽⁴⁾, and also, that profits will always be such as to cover costs.

Certain aspects of Chamberlin's analysis have been treated at length by Triffin.⁽⁵⁾ He indicates that the particularizing

(1) Ibid., p. 89.

(2) Monopolistic Competition and General Equilibrium Theory, p. 21.

(3) The Theory of Monopolistic Competition, p. 111.

(4) Monopolistic Competition and General Equilibrium Theory, p. 22.

(5) Ibid., p. 24 ff.

assumptions (as distinguished from the general definition of equilibrium conditions) must be dealt with as two groups:

(a) those which assume that the Cost curve is constant and (b) those which assume that all competing firms within the group are similar and that each one may act as representative of group behaviour. The first set of assumptions are, according to Triffin, less drastic than the second.⁽¹⁾

The assumption of symmetry, under which all firms are held to possess the same Demand and Cost curves and to be faced with markets of the same size, together with the implicit assumption that a price change by one of the competitors in a large group will spread its impact over all the competitors and so render the influence of the individual negligible, is modified somewhat in the later stages of Chamberlin's analysis.⁽²⁾ He points out that each "general class of product divides itself into subclasses"⁽³⁾, with the result that certain products overlap more significantly into some groups than others and for this reason it cannot necessarily be expected that the gains made by one seller from a price cut will be taken evenly from his competitors. Certain varieties of the same product - depending upon the actual definition of such an entity - will be in closer competition than others, and for this reason, different competitors will be influenced to greater or lesser extents by the actions of their rivals.

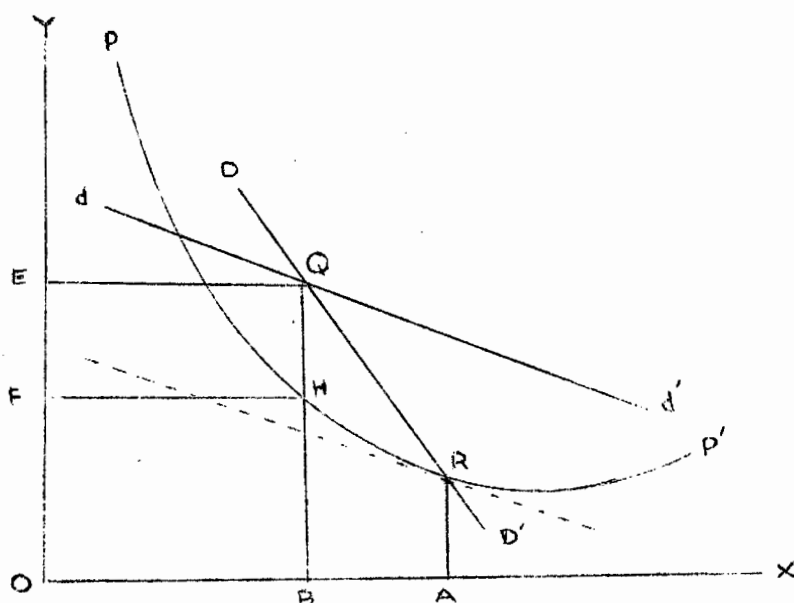
Before proceeding with this discussion however, Chamberlin's argument must be placed in proper perspective. If we assume, with Chamberlin⁽⁴⁾, that there are sufficient firms in the group to achieve an equilibrium adjustment but that the prevailing price is, for the moment, above a level which would correspond to that position, we are able to indicate, with the aid of a modified set of Demand curves, the processes involved in providing a solution.

(1) Ibid., p. 24.

(2) The Theory of Monopolistic Competition, p. 102 ff.

(3) Ibid., p. 102.

(4) Ibid., p. 90.



In the above diagram⁽¹⁾, the Demand curve dd' represents the demand for the product of the individual seller, assuming the prices and "products" of his competitors to be given. Since it characterises the conditions of monopolistic competition, it indicates the increase or decrease in sales the seller would experience were he (alone in this case) to lower or raise his prices. The curve DD' represents the demand facing any one seller provided that there is no difference between his prices and those of his competitors. It is obviously more inelastic than dd' since no competitor can, by lowering his price, affect his rivals' customers. It may also be taken as representative of the Demand curve facing the group of competing monopolists as a whole. If we assume that, for the present, all are charging price BQ , selling OB and making "excess" profits $FHQE$, curve dd' , drawn through Q , would show the additional sales which any one seller could obtain by lowering his price, if others held theirs at BQ . Since each competitor is so insignificant none need fear competitive or retaliatory price cuts, it is likely that all sellers will eventually be induced - by the vision of increased profits - to cut prices under the circumstances described above.

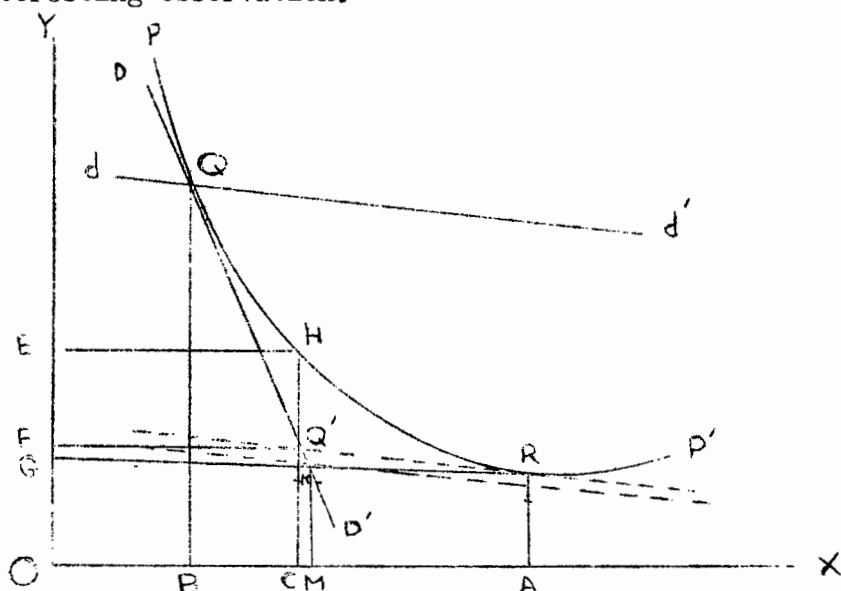
"The curve dd' , then, explains why each seller is led to reduce his price; the curve DD' shows his actual sales as the general downward movement takes place."⁽²⁾

The downward movement of dd' along DD' with a successive lowering of prices will come to a halt at AR , since after this point, production costs will not be covered by receipts.

(1) Ibid., p. 91.

(2) Ibid., p. 91 - 92.

Another Chamberlinian diagram may now be used to indicate an interesting observation.⁽¹⁾



Chamberlin points out that, the larger the number of sellers within the group, the further will DD' lie to the left, and vice versa, since the share of each in the total will be smaller in the former case and larger in the latter. If we assume that, with a price of BQ prevailing, new competitors will be attracted to the industry, the curve DD' will be pushed towards the left until the position of tangency with curve PP' is attained at price BQ and consequently, output per firm OB . Cost, in this case (owing to the diseconomies of the existing scale of production) equals price. Each producer however, will consider the possibility of increasing his profits by moving down the curve dd' , with the result that all (by our earlier criterion) will do precisely that. Since DD' indicates the sales of each producer as the lowering of price by all takes place, it is obvious that losses for all will increase steadily. (Chamberlin points out, for example, that at price CQ' , sales of each seller will be OC , with losses of $FQ'HE$)⁽²⁾. If any seller, however, cuts to AR , he will cover his costs and avoid loss. Since it is extremely likely that all will do so, the total sales divided by the number of sellers (represented by curve DD') will be OM and losses will be great. The only real way of solving the problem would be the exodus of firms. At the same time, Chamberlin considers it possible to reduce losses, even if it is not possible to avoid them altogether, by lowering price slightly further than the first dd' curve would seem to indicate i.e. if dd' lies only slightly lower than the line passing through R . However this solution is only of limited value and will cease to be a proposition below the position of the lowest dd' curve in the diagram.

(1) Ibid., p. 92.

(2) Ibid., p. 93.

Bearing in mind the principle that an exodus of firms will cause the DD' curve to shift upwards and to the right, Chamberlin defines equilibrium of the group in terms of two characteristics:

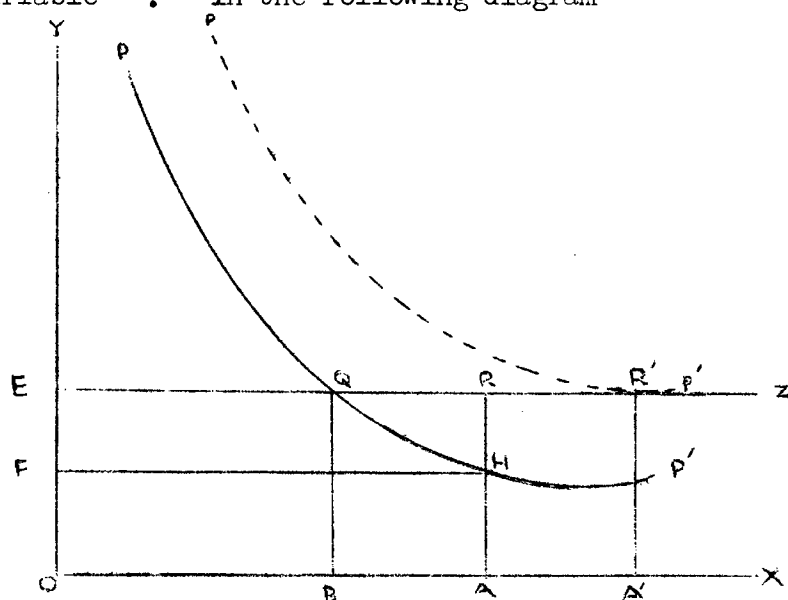
- "a) dd' must be tangent to PP' , and b) DD' must intersect both dd' and PP' at the point of tangency".(1)

At the same time, we should bear in mind the Chamberlinian notion of subclasses, discussed earlier.

Since the phenomenon described above is only characteristic of monopolistic, and not pure or perfect, competition, the

- "...elasticity of dd' (may be regarded) as a rough index of buyers' preferences for the 'product' of one seller over that of the other."(2)

We now turn to an examination of the conditions under which group equilibrium will be attained with price constant and the "product" variable⁽³⁾. In the following diagram⁽⁴⁾



the price is fixed at OE with the horizontal EZ , indicating the adjustments of any seller, drawn at this height. If we draw Cost of Production curves similar to those presented in the earlier diagram, PP' may be taken to represent "an optimum variation of the 'product'"⁽⁵⁾, while OA will indicate the demand for it. Total costs and total "excess" profits are $OAHF$ and $FHRE$ respectively. Since the prevailing level of profits will be sufficiently high to attract new competitors, the sales of each producer will be reduced to OB where cost will be equated with price and there will be no tendency for sellers to move into or out of the industry. Should

(1) Ibid., p. 93.

(2) Ibid., p. 93.

(3) Ibid., p. 94 ff.

(4) Ibid., p. 95.

(5) Ibid., p. 95.

output fall to less than OB, an efflux of producers would be sufficient to restore equilibrium.

If we accept the notion that individual sellers can increase their profits by improving their "products", while those of their competitors remain the same, demand for such an individual seller will increase (reflected by a movement along EZ) as will his costs (reflected by a shift in PP' upwards to the right). As was the case with the price movement discussed in the preceding analysis, all producers will attempt to improve their products in view of the higher profits to be derived. The result is that the overall gain to all producers within the group is less than would have accrued to the individual who acted while his rivals did not. The fact that costs are now generally higher means that profits of each are now probably generally lower, but so long as any seller considers it possible to increase his profits, the process of "product" improvement will be continued up to the point where any further improvement will result in a level of costs higher than revenue. The limit cannot lie higher than pp' since if it did, the product would not be produced. It can, however, lie below it, since by definition of the curve EZ, a price reduction cannot result in an increased output, and the fact that it might indeed occupy this position does not necessarily imply that demand will have increased to OA'. In view of the difficulties involved in quantifying "product" changes, Chamberlin has pointed out that

"...any attempt to define with precision the exact point of equilibrium" is rendered hazardous "...It would seem that the most that can be said is that it will be characterized by 1) the equation of cost and price, and 2) the impossibility of a 'product' adjustment by anyone which would increase his profits. It will involve either the intersection of the price line with the curve of cost of production or its tangency to it."(1)

(1) Ibid., p. 97.

Finally, we may turn briefly to the case in which price and "product" are variable. If we imagine a Demand curve sloping downwards and passing through R' , its negative slope would immediately imply that it lies above pp' to the left of R' , since pp' has zero slope. By raising price and reducing sales a seller could increase his profits. Since this would affect new competitors, the effect would be to shift the Demand curve of each seller to the left until it was tangent to pp' .

"Under given conditions with regard to the 'products' and prices of his competitors, each seller will choose that combination of price and 'product' for himself which will maximize his profit. For each variety of 'product' possible to him there will be a price which will render his profit a maximum relative to that 'product'. From these relative maxima he will choose the largest of all." (1)

After that, the competitive forces described above determine the equilibrium position.

At this stage in his The Theory of Monopolistic Competition Chamberlin proceeds to an examination of the processes by which equilibrium is established in the "small group" case i.e. under such conditions where the number of competitors is so small as to make each one a significant force in the market. (2) The result is that each seller must be aware of the influence which his presence has on the price and output policies of his competitors, who, in their turn, will be a major factor in his calculations. Effectively, the situation we are about to consider is a combination of the element of numbers - fewness in this case - and the principle of product differentiation. If we assume in the third diagram (above), that the curves refer to a small number of firms, a rather different result from the one described above presents itself. In the previous discussion we considered the possibility that any one seller might maximize his profit by lowering his price from BQ , provided - and this was possible - that others did not feel themselves adversely affected and therefore follow suit. The only reason why all sellers would eventually do this would be because each felt that no others would be sufficiently affected by his actions to resort to retaliatory price reductions. In the case of the "small group" however, this is not so. Each seller could, of course, improve his position by lowering his price, provided that others did not follow suit, but since each seller is extremely sensitive to the

(1) Ibid., p. 98.

(2) Ibid., p. 100.

actions of his rivals, a price cut by any one would induce an overall downwards shift with the result that all would be worse off than before. Similarly, since each seller is fully aware of the ultimate consequences of cutting his price he will therefore refrain from doing so.

Assuming, for the moment, that the actions of an individual seller are analytically separable from the reactions of his competitors, and each seller feels that his rivals will not, in fact, be influenced by his decisions, and will keep their prices fixed, it is possible to say that his price will be lower than BQ and will probably be AR if bidding is competitive. Similarly, if sellers anticipate that the outputs of their respective rivals will remain fixed, prices

"...will settle at a determinate point between BQ and AR, which point is lower as their numbers are greater, coinciding with AR if their numbers are very large ...and always defined by the condition that no seller can increase or decrease his supply with profit, the supplies of the others remaining constant. It must be noticed that the extreme limit AR below which price can never descend is higher than that for a standardized product, the latter coinciding with the lowest point of the cost curve PP'."(1)

The exact nature of the "indirect influence" implicitly referred to in the above discussion is not easy to analyse. A seller may regard his influence, or that of his rival, as being of negligible significance for any number of reasons of which, according to Chamberlin⁽²⁾, the following are the most notable: (a) the nature and direction of a seller's interest in the market (b) uncertainty as to whether competition from a rival will take the form of price or output variation (c) the skill and vision of a rival and (d) the difficulty of deriving the exact, or quantitatively ascertainable, influence of one seller's policies on another's and (e) uncertainty as to the direction of the time lag between the policy change of a seller and the reactions of his rivals.

We have already touched on the question of Chamberlin's "subclasses". We may now mention, in the light of our immediately previous discussion the nature of a "chain relationship"⁽³⁾, since it may be regarded as having a fair amount of relevance for the issues which follow. The principle of the "subclass" would

(1) Ibid., p. 101.

(2) Ibid., p. 101.

(3) See above.

seem to indicate that certain "products" within a given "group" approximate more closely to one another than do others, with the result that individual competitors making up the so-called small group fear action on the part of certain close rivals more than "distant" ones. What this implies is merely that a price cut by one seller A, will not necessarily oblige another competitor B to match it immediately, but this situation might ultimately transpire on the basis of the fact that a whole range of intermediate competitors ranging in increasing "distance from" A to "decreasing distance from" B will slowly be affected and will therefore be obliged to react to varying degrees. This is the principle of the so-called chain relationship.

Another issue which Chamberlin deals with is that of "Equilibrium with Excess Capacity"⁽¹⁾. He points out that there may be a large number of reasons - other than those pertaining to the small group - why price cutting is not undertaken by competing monopolists. Of these, a very important one (which will be dealt with in greater detail later⁽²⁾) is the fact that individual sellers may aim at less than maximum profits purely because they do not wish to encounter the strain of aggressive business and are prepared to "live and let live"⁽³⁾. In such a case - assuming that all businessmen display the same preferences - prices will tend to move together and the curve dd' will no longer be useful. Businessmen might "set their prices with reference to costs rather than to demand"⁽⁴⁾, and the price could settle anywhere between BQ and AR in the diagrams. If, at a price of BQ, new competitors arrived, the DD' curve would be pushed to the left and to a position of tangency with BQ, with the result that at AR costs could not be covered. To regain "equilibrium" a new profit margin would have to be selected and added on to current prices.

Chamberlin suggests that another reason why price cutting is not arbitrarily undertaken is that, where prices are low, consumers are apt to get the impression that quality is inferior.⁽⁵⁾ For obvious reasons, this observation is rendered invalid by the assumption of "perfect knowledge", but should be noted. At the same time, a low priced establishment (particularly of a retail variety) is likely to attract a lower-class customer and in such a

(1) Ibid., p. 104.

(2) See reference to Hall and Hitch below.

(3) The Theory of Monopolistic Competition, p. 105.

(4) Ibid., p. 105.

(5) Ibid., p. 107.

case, price cutting may have the undesirable effect of lowering the "tone" of the shop. Since the "tone" of an establishment is an important part of the "product" in retailing, the argument has some relevance.

A fairly common technique employed by sellers unwilling to cut prices is to provide toys, coupons, household goods, insurance and a number of other items together with the actual good purchased. In this way, while prices themselves are not cut – and retaliation for that reason is less likely, the consumer is, in effect, given "more for his money". In such a case, the seller who cuts prices obtains some of the advantages which the dd' curve offers to the competitors in the small group, without the disadvantage of incurring the competition which would normally arise, since "price cuts" are disguised.

For these and other reasons, there is a tendency towards the creation of "surplus capacity" under conditions of monopolistic competition, with the result that prices tend to be higher, and output smaller than in cases where price competition is permitted to function normally.⁽¹⁾ We have already examined the significance of the sloping Demand curve for price and output, and have observed that the AR curve for the group in equilibrium lies tangentially to the AC curve at a point higher than that which would indicate minimum cost.

Professor Robinson presents a series of arguments similar to those of Professor Chamberlin, although greatly lacking in the detail which characterizes the latter's analysis⁽²⁾. Since little further will be gained from a study of Robinson's work in respect of equilibrium, we shall not dwell on it here. There are, however, a number of other issues which have been raised.

In an article entitled 'Elements of Indeterminacy in the Theory of Non-Perfect Competition'⁽³⁾. Benjamin Higgins suggests that the

"...close relationship of relative indivisibilities of factors of production to non-perfect competition results is a highly discontinuous cost curve with possible multiple equilibria" ⁽⁴⁾

(1) Ibid., p. 109.

(2) The Economics of Imperfect Competition, Chapter 7.

(3) American Economic Review, September 1939.

(4) Ibid., p. 468.

This argument is based on the belief that

"...where the magnitude of the investment (by the producer) in the fixed factor is large relative to the market for the product, the number of firms is limited, and imperfect competition exists."(1)

The result is that where factors of production may be regarded as being "indivisible", imperfection of competition is likely to appear.

Since it is possible that certain indivisibilities may exist even under conditions of perfect competition, another aspect must be employed to indicate the significance of the special case of monopolistic competition. If we accept the notion that indivisibilities in the factors of production result in discontinuities in the Cost curve - since the addition of increasing quantities of a relatively indivisible factor, say blast furnaces, will not result in a smooth U-shaped PP' curve, but will probably create possibilities for establishing a number of short run curves and equilibrium points at which MC can be equated with MR, in the long run - it is quite conceivable that there will be a strong element of indeterminacy as far as a final equilibrium adjustment is concerned. This is due to the fact that the point of equilibrium will depend upon the output at which the firm starts production.⁽²⁾ Because, it is assumed that, under conditions of perfect competition, the Demand curve is a horizontal line, all that is required to establish equilibrium in the face of such similar discontinuities is to produce up to the point where the Average curve lies at a tangent to the PP' curve at its lowest point.

Higgins also suggests that the indeterminacy which might prevail with respect to costs can arise

"...out of the relationship between non-perfect competition in the commodity market and non-perfect competition in the factor market."(3)

The form which this phenomenon takes is generally that in which product differentiation creates the conditions for imperfection and severely limits the market for any one type, or variety, of commodity. If the uniqueness of the final product itself lies specifically in one of the factors constituting it, the market for that factor may also be considered limited and therefore conducive

(1) Ibid., p. 471.

(2) Ibid., p. 473.

(3) Ibid., p. 474.

to monopoly on the part of the maker of the final product. Since however the factor itself may be minor and perhaps relatively inexpensive, the problem is not always a real one. The question should however be considered in greater detail, for the reason that, where there is a monopsonist (who is also, say, an oligopolist), his actual Cost curve will be determined by the relative bargaining strengths of himself and seller of the factor of production in question. For this reason, the curve PP^1 cannot, under all circumstances, be regarded as strictly determinate, and the net result is that a "tangency" equilibrium of AC and AR cannot be established.

Higgins raises a number of other issues concerning the question of indeterminacy of equilibrium.

He finds that such indeterminacy may arise from various factors on the demand side. Where the impact of rivals' actions are taken into consideration in the construction of the Demand curve for the firm in monopolistic competition, Higgins claims that there is no reason for assuming that the latter will in fact take on the configuration accepted by orthodox theory. In fact, a reduction in price by one seller might cause a competitor to reduce his by so much more that the former will lose sales. Alternatively, a reduction in price by one seller might induce another to raise his prices radically and concentrate his attention on a different market prepared to pay the higher price. A related factor in respect of the Demand curve is that the reactions of a competitor to a firm's change in price are only estimated, and that, if a firm were able to ignore such reactions, it would probably find that its

"...estimated average revenue curve would have at least the same general configuration as the demand curve itself." (1)

The fact that it must consider its rivals means that the estimated Demand curve provides an inferior tool for equilibrium analysis, since it possesses no statistical value whatsoever.

Harrod, in his "The Theory of Imperfect Competition Revised"⁽²⁾ develops the argument that there is no reason why imperfect competition should result in excess capacity, as Chamberlin suggests. Assuming free entry, Harrod points out that a producer will select a price which will yield him no more than that profit which is compatible with the equilibrium of the industry (allowing for minor variations on the basis of that which the producer feels

(1) Ibid., p. 475.

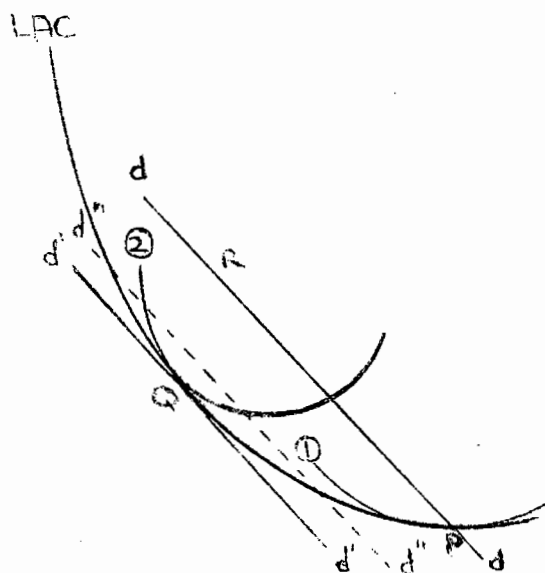
(2) Published in his Economic Essays, Macmillan, London, 1952.

is of special advantage to himself), and will purchase the equipment necessary to produce an output at the lowest cost possible in respect of the selected price and will maintain that price

"...even although the short period marginal revenue yielded by such a policy is less than the marginal cost."(1)

The implication of this is that, the producer will produce at the point where the AR curve cuts the Long Run AC curve at its lowest point, rather than at the point where in Chamberlin's diagram, the Demand curve lies at a tangent to the curve PP'. In the diagram below⁽²⁾ LAC is the long run Average Cost curve of the individual firm, 1 and 2 are short-run Average Cost curves for plants of different sizes. P is the lowest point on both 1 and the long-run Average Cost curve, while Q,

"...the point of tangency of 2 to LAC, is also the point of tangency of the demand curve d'd' which will face the entrepreneur when abnormal profits due to initial production at R by all members of the group have been eliminated by newcomers. Q thus corresponds to Professor Chamberlin's large group equilibrium point."(3)



Harrod's reasons for selecting P instead of Q in the long run are as follows: (i) There is no certainty about the future. For this reason a firm will be careful not to expand its capacity merely to take advantage of a chance to snatch quick short-run profits; (ii) If a producer is geared to equating short-run marginal costs with short-run marginal revenue, using this to determine his price and thereby making excess or supernormal profits, he will attract competitors, which will immediately mean

(1) Ibid., p. 151.

(2) Taken from M.E. Paul 'Notes on Excess Capacity', Oxford Economic Papers, February 1954, p. 34.

(3) Ibid., p. 33.

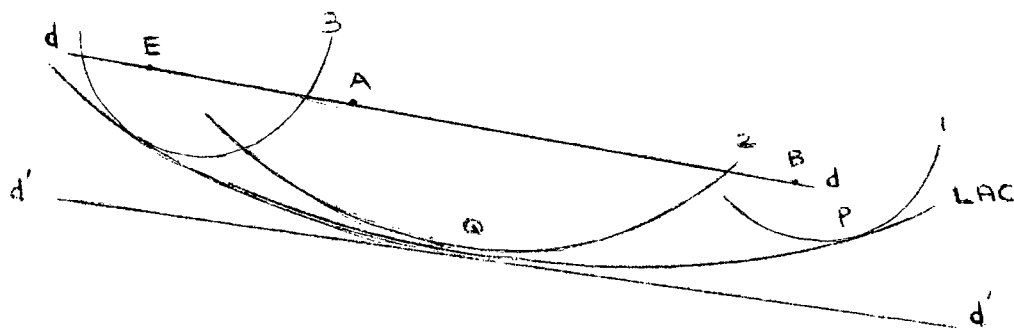
that his output will be decreased and that he will now be faced with a problem of utilizing his excess capacity. He should be aware of this possibility from the beginning and design his capacity accordingly.

These arguments have, however, been severely criticized by M.E. Paul in her article. As far as Mr Harrod's first point is concerned, Mrs Paul points out that the profits which may be available to a firm in the short run may be sufficiently large to outweigh even the significance and desirability of profits in the long run. Also, perhaps it might be that the sacrifices which a firm may make when opting for short-run profits need not be very great and would therefore not be a very important consideration in business calculations. Harrod has suggested that a firm might be weakened by the long-run implications of snatching quick profits, but Mrs Paul has suggested that

"...a firm in large-group equilibrium
need ... be no weaker than a firm producing
at minimum average cost."(1)

If, therefore, the fact that a firm, by deciding to take advantage of certain short-term profit advantages puts itself at a long-term disadvantage no more serious than a reduction to a level at which it is just able to cover its long-term minimum average costs, enters into the argument, there is no reason to believe that such a firm will necessarily choose to produce at point P rather than at Q.

The second criticism which Mrs Paul makes is with reference to Mr Harrod's notion that, by equating short-period marginal revenue to short-period marginal costs, a producer cannot avoid the danger of being left with redundant capacity in the long run. In order to clarify the issues involved, she provides the following diagram. (2)



(1) Ibid., p. 34.

(2) Ibid., p. 36.

In the diagram, B indicates the point at which the output produced will result in the optimum profit, and is determined by the intersection of the long-run Marginal Revenue and Marginal Cost curves. Using the same notation as in the previous diagram, it will become evident that plant 1 is of the optimum size, while plant 2 is the most suitable for producing at Q. d'd' is the Demand curve which will result from production starting at B. With plant 2 and the demand curve dd, A will provide the maximum profit point, while E fulfils the same function as far as plant 3 is concerned. Mrs Paul's observations regarding Mr Harrod's assumptions run as follows: Should the producer start production using plant 1 he will find that he is left with excess capacity. By producing with plant 2 and selling at price A (determined in the manner that it is), he will experience the same problem; while, by producing with plant 3 and setting his price this time at E, he will also not be able to avoid redundancy. The "argument", Mrs Paul points out, "seems however to rest on a confusion".⁽¹⁾ A producer will have to contract his plant progressively only if he refuses to reduce his prices in line with the shrinking market possibilities with which he will become increasingly burdened. There is, however, no reason to believe that the old remedy, very much a part of the orthodox analysis, of lowering prices in order to expand the market and take advantage of available capacity, will not prove valuable under such circumstances. By doing so, a producer will not be likely to find his plant redundant as demand contracts.

Mrs Paul concludes that

"...although we have so far found no reason to abandon the doctrine that imperfect competition leads to excess capacity,...the introduction of short-run cost curves clearly makes necessary some modification of the traditional path towards equilibrium."⁽²⁾

She points out that where large changes in output arise relative to the long-run cost curve of the firm, Chamberlin's argument ignores the fact that it is possible for the producer to be stuck with plant capacity of the wrong size. For this reason she appears to be partially in agreement with the overall stand taken by Harrod i.e. that a consideration of both the short-and long-run cost implications of a specific size of plant is necessary before the final decision to commence production on a particular scale can be taken. Chamberlin's analysis, in that it provides no adequate reference to the question of short-run curves, fails in this respect.

(1) Ibid., p. 36.

(2) Ibid., p. 39.

J.R. Hicks, in his article 'The Process of Imperfect Competition'⁽¹⁾, distinguishes between two types of entrepreneur - "snatchers", or those who are concerned only with making quick profits, and "stickers": those who wish to establish and maintain steady businesses. Both of these types will be influenced by such factors as the

"...lengths of time for which the closed (short) and open (long) periods are expected to last, the rate of time preference, and the willingness to bear risks."⁽²⁾

Whilst it is not necessary to discuss his work at great length, it should be pointed out that the study provides a fair amount of the detail which is absent from "The Theory of Monopolistic Competition."⁽³⁾

Another author who merits attention in the current discussion is Wolfgang F. Stolper. In an article entitled 'The Possibility of Equilibrium Under Monopolistic Competition'⁽⁴⁾, he indicates that

"...stable group, industrial and general equilibrium are all impossible under conditions of monopolistic or imperfect competition."⁽⁵⁾

Stolper suggests that there is some confusion as to the nature of "freedom of entry", since under conditions of pure competition, for example, a producer need only take the decision to produce, and he automatically becomes a competitor to another producer. Under monopolistic competition, however, the potential producer has to decide what to produce. This difficulty arises from the fact that under pure competition, all goods are held to be homogeneous, while under monopolistic competition the element of product differentiation creates the problem of deciding what product (or variety of product) will be most competitive.

"It follows that while the presence of profits may be an incentive to look for substitutes and rival products, it is not sufficient to insure a flow of factors of production into the neighbourhood of the profitable product."⁽⁶⁾

If a new competitor believes that his differentiated product

(1) Oxford Economic Papers, February 1954.

(2) Ibid., p. 45.

(3) Another article which is of interest is by Arthur Smithies, entitled 'Equilibrium in Monopolistic Competition'. He discusses the necessary conditions for stable equilibrium. See Quarterly Journal of Economics, November 1940 and 'Addendum', February 1942.

(4) Quarterly Journal of Economics, May 1940.

(5) Ibid., p. 519.

(6) Ibid., p. 520.

is far superior to those of his competitors, he might very well enter an industry which is making only normal profits, or alternatively, which is made up of roughly the same number of successes as failures.

"His own profits are, therefore, largely independent of the profits and losses of his rivals, and the same is likely to apply to his anticipations."(1)

Stolper takes the argument a step further, by suggesting that, since people's tastes and preferences change rapidly, either of their own accord, or as a result of persuasive advertising, products themselves must keep changing, with the result that the concept of a stable group of commodities must fall away.

"...there is no freedom of entry because there is no well defined industry or group which could be entered. Hence neither group nor industrial equilibrium can exist."(2)

Cassels⁽³⁾ defines excess capacity as

"...the difference between the output that the productive agent in question is capable of producing and the output it is actually called upon to produce."(4)

At the same time he points out that the exact determination of such quantities is fraught with problems and, at best, the estimation of the extent of such excesses is vague. One of the major difficulties is to establish whether the term "excess capacity" is being applied to the fixed factors in a given production unit such as a firm or industry, or whether it is being applied to all the factors in such a unit.

"If because a pig-iron producer is using only half his blast furnaces we say that there is one hundred per cent excess capacity in his business it is evident that we can be referring only to the fixed factors in the business. The output of pig-iron could be doubled without increasing the number of furnaces, but it could not be doubled without increasing the amounts of coal and iron ore and labor that are used."(5)

Since this distinction frequently arises, Cassels concludes that

(1) Ibid., p. 521.

(2) Ibid., p. 524.

(3) 'Excess Capacity and Monopolistic Competition', Quarterly Journal of Economics, May 1937.

(4) Ibid., p. 427.

(5) Ibid., p. 427.

Chamberlin must be referring to conditions under which there is an excess of all the factors in an industry. The excess capacity resulting from rigidities in the combination of fixed factors generally accounts for the shape of the short-run cost curves, and the basis for analysing such excess capacity should, according to Cassels, be taken

"...as that at which the average full costs of production are at a minimum."(1)

In order to do this, he suggests a number of ways in which fixed factors can be valued. He points out, however, that the primary source of confusion lies in the attempt to use Chamberlin's long-run Cost curve analysis to investigate short-run phenomena.⁽²⁾

This is simply because there are no fixed factors in the long run while in the short run they generally account for the rigidities in the production process. Therefore, in the Chamberlinian sense, the "least cost" point (or any cost point for that matter) on the curve of production will be the result of a situation in which

"...all the factors are combined together in the most appropriate forms and proportions."(3)

The Chamberlinian Cost curve falls initially as a result of the economies derived from an increasing scale of production, and rises later as a result of certain diseconomies of the nature already discussed.⁽⁴⁾ Since the shape of the short-run cost curve is the result of the inflexible nature of large fixed factors, it will be obvious that, although the two curves are similar in shape, the nature of their respective origins differs.

In an article entitled 'Equilibrium of the Firm'⁽⁵⁾, Richard A. Lester introduces the concept of an equilibrium zone, rather than a point. He indicates that

"It is doubtful whether business executives generally think, plan or act in terms of a single equilibrium point determined separately for each item of production."(6)

(1) Ibid., p. 428.

(2) This point has been discussed above.

(3) Cassels, Ibid., p. 428.

(4) See above.

(5) American Economic Review, March 1949.

(6) Ibid., p. 480.

While this argument is less theoretical than those preceding it in our discussion, the notion is an interesting one. Lester suggests for example that manufacturers of branded items, e.g. clothes, electrical goods, cars etc. generally regard prices as remaining fairly fixed over short periods - say 6 months to a year - and, should any price change occur within such a period, it is likely to remain fixed for some time. In other words, price changes do not take place continuously and a condition of "point demand"⁽¹⁾ prevails. Combined with the phenomenon of point demand, it is possible that a relatively small change in output is unlikely to affect the curve of Total Costs within a narrow range, and businessmen might feel justified in considering their "operations satisfactory or reasonably profitable"; they

"...would not feel pressed to move outside the zone or to attempt to influence sales so that the firm would arrive at any particular point within the zone."⁽²⁾

In his article 'Reserve Capacity and the Kinked Demand Curve'⁽³⁾, P. Streeten has pointed out that, not only can excess capacity arise through the processes of monopolistic competition, but it is possible that businessmen may actually plan for it. He suggests that there are three "motives" for this hoarding of capacity⁽⁴⁾: 1) Technical: A businessman may decide to keep plant in reserve to avoid loss of time owing to breakdowns. Also, the existence of flexible reserve capacity in multi-product manufacturing and at various stages of production can assist in preventing bottlenecks from occurring. 2) Pecuniary: Streeten regards this motive as analagous to the desire to hold money balances in excess of those required for transactions purposes. A manufacturer might wish to hold sufficient capacity to accommodate orders which might not be fulfilled were capacity to be fully employed. In this way he can maintain the goodwill which he might have lost if he found himself unable to accept customers' orders. In this connection, Streeten points out that the fact that "goodwill is easier lost than gained" means that

"...price reductions do not always or often tie up a new clientele, but make it impossible or very difficult to raise prices again, if this should become necessary."⁽⁵⁾

(1) Ibid., p. 481,

(2) Ibid., p. 482.

(3) Review of Economic Studies, 1950-1951, p. 103.

(4) Ibid., p. 103.

(5) Ibid., p. 104.

The third motive discussed by Streeten is speculation. If one equates the accumulation of stocks, with the hoarding of reserve capacity, it becomes fairly clear that it might benefit a manufacturer to refrain from current use in the hope of higher yields at a later date. Also it may be profitable to "lay in" capacity (equipment or buildings) to be used later, either as a substitute for higher price equipment which the manufacturer might have had to buy, or for resale.

For the above reasons, Streeten would conclude that excess capacity possesses a certain value to the manufacturer.

Marion J. Levy, Jnr. suggests that there is an element of confusion which arises from Chamberlin's analysis.⁽¹⁾ The belief that the equilibrium of the group can only be achieved under certain circumstances by the exodus of firms must, she points out, be qualified by the

"...assumption of a difference in the hardihood of the firms involved (i.e. a difference in the ability of the firms to produce over a period of time at a loss)."(2)

If no assumption of this nature is made,

"...there can be no equilibrium...because all firms would be driven out at once."

Conversely, unless it were specifically assumed that there were no distinctions in the hardihood of the various competing firms in the small group, no price would be perfectly stable if any one producer felt that he could endure ~~more~~ severe series of price cuts than his competitors, and that the

"...total losses...involved in driving out the extra firms will be less than the total profits."(3)

A paper written by R.A. Gordon, entitled 'Short-Period Price Determination in Theory and Practice'⁽⁴⁾, focusses attention on the question of the divisibility of factors of production in the short- and long-period. He points out that the indivisibilities which may arise in the short-period will tend to create discontinuities in the curve of Total Costs and induce it to

"...rise in large steps, instead of continuously, as theory usually assumes."(5)

(1) 'Note on Some Chamberlinian Solutions', American Economic Review, June 1940.

(2) Ibid., p. 345.

(3) Ibid., p. 345.

(4) American Economic Review, June 1948.

(5) Ibid., p. 275.

The net result is that, because investment in physical capital must frequently be made in "large chunks", business-men often tend to be unwilling to increase output even if profits could be increased.

Thus far, our examination of the conditions for individual and group equilibrium has run in terms only of the single-product firm. Since, however, the greater part of this section of the thesis is intended to provide a background to the analysis which follows, and since the analysis itself will be primarily concerned with retail theory, it is desirable that we examine, albeit briefly, since little work has been undertaken in this field to date, the question of multi-product equilibrium i.e. the nature of the problems surrounding producers manufacturing a number of products. This question naturally has relevance for situations in which sellers sell more than a single type of product.

In Eli W. Clems's article 'Price Discrimination and the Multiple-Product Firm'⁽¹⁾, the author points out that

"...it is probably impossible to find in the whole of our economy a single firm that sells a single product at a single price."⁽²⁾

Since it is possible for a firm to produce a number of products, it is also possible that it will attempt to equate the Marginal Costs and Marginal Revenues for only one item, and content itself with a different policy for its others in the hope that the profits on the former will cover the losses on the latter. Whatever the individual procedure may be, the principle is that price discrimination is not a very different phenomenon from multiple-product production. The argument in support of this view is based on the belief that the individual firm must continuously find new ways of utilizing idle capacity. In order to do this, it will search for markets (suited to the nature of its "product" and production capacity) in which there are opportunities for profits, and will carry on its production until Marginal Costs and Price are equated in the least profitable market. Clemens points out that, for example, the manufacture of steel is characterized by many different types and qualities of final product, so that in this case it may justifiably be classified as a "multiple-product" industry. The list of examples would appear to be quite extensive. The purpose of utilizing available capacity to the fullest is obvious - only at this point is output such as to

(1) Review of Economic Studies, 1951-1952, p. 1. For an initial analysis, see The Economics of Imperfect Competition, Chapters 15 and 16.

(2) Clemens, *ibid.*, p. 1.

make the greatest contribution to fixed overheads. Clemens envisages a situation in which a firm is operating at about 70% of capacity and succeeding in equating MC and MR. Since it still possesses excess capacity it might be able to increase output without a proportionate increase in costs at the margin. At this stage it has the alternative of either reducing prices in the market in which it is currently operating, or seeking new markets in which Marginal Revenue exceeds Marginal Costs. Should it choose to do the latter it will probably enter the markets in order of their individual profitability. Only when MC and MR have been equated in the least profitable market (as already indicated above) will it pay the individual firm to halt its expansion.

In an article entitled 'The Equilibrium of the Firm in Multi-Process Industries' ⁽¹⁾ W.J. Eiteman suggests that

"...it is absurd to claim that entrepreneurs strive, consciously or unconsciously, to expand their scale of operations until marginal costs equal marginal returns."⁽²⁾

He bases his argument on certain empirical data which would seem to indicate that the concept of a margin is too poorly constituted to describe the complexities of production in multiple-process industries. The orthodox notion that homogeneous products can be increased by one unit at a time, falls away where there is in fact no product homogeneity and where additions to both output and input are made in terms of units of varying types. Where, further, a single product is being considered, it is possible to examine the marginal input unit by withdrawing it from the process and noting the effect. Where a number of different types of input unit are being employed simultaneously in different parts of the plant, exact measurement of the significance of each is rendered far more complicated. In many cases, the manipulation of marginal units in an attempt to equate marginal costs and marginal revenue creates problems which dwarf the advantages to be derived from such an exercise.

On this issue, however, M.A. Adelman's 'Equilibrium in Multi-Process Industries - Further Comments' ⁽³⁾, makes the point that in multiple-process firms it is quite commonly found that

(1) Quarterly Journal of Economics, February 1945.

(2) *Ibid.*, p. 284.

(3) Quarterly Journal of Economics, May 1946.

(4) *Ibid.*, p. 467.

one department is able, with only a small addition to its factors of production, to move ahead far more quickly than, say, another operating under more favourable conditions. Since this type of situation frequently arises in vertically integrated firms, it is likely to result in excesses which cannot be absorbed by other departments, and the effect will be to stimulate such lagging departments in the attempt to improve overall productivity and perhaps also productivity per unit of input employed. Adelman suggests that

"...because a changing demand situation gives rise to constant changes in the level of output yielding the maximum gross revenue, and because changing techniques put one department ahead at one time, and subsequently another, the constant comparison of marginal costs is not less but more important for a multi-process firm than for an isolated producer."(1)

The question of multi-product manufacturing and selling will be dealt with again at a later stage in this thesis.

(1)Ibid., p. 467.

CHAPTER IV

Before concluding the introductory notes on the nature and implications of The Theory of Monopolistic Competition and The Economics of Imperfect Competition, there remains to be discussed the question of Selling Costs, and its relevance for the overall analysis.

In his The Theory of Monopolistic Competition, Professor Chamberlin provided the first detailed analysis of selling costs and an indication of their importance in distinguishing monopolistic from pure or perfect competition.⁽¹⁾ Thus far we have followed Chamberlin's technique of assuming given wants and perfect knowledge on the part of buyers, and an appropriate analytical framework has been provided. At this point, however, the issue of selling costs will be introduced and the following definition employed:

"Selling costs are...costs incurred in order to alter the position or shape of the demand curve for a product."⁽²⁾

Initially it is necessary to distinguish between Production Costs and Selling Costs.⁽³⁾ Selling Costs may be considered as advertising of any kind, the salaries of those persons employed in selling the product, various forms of encouragement (discounts, margins) granted to dealers as a stimulus to increase sales efforts, displays and demonstrations etc. It must naturally be assumed that consumers can in fact be persuaded to buy a product or otherwise it would not pay a seller to indulge in expenditures of the sort enumerated. Under conditions where all goods are exactly alike (in either the imaginations of the buyers, or in reality) and where each seller can sell as much as he wishes at a given price, it is not necessary to incur selling costs as a means of differentiating products or increasing sales. Similarly, where wants are given and there exists perfect knowledge in the minds of consumers, selling costs will also have no part to play since it will not be possible to change the opinions of the buyers through a form of advertising which is not always necessarily designed to point out real differences amongst products, but rather, is more frequently geared to making imaginary distinctions.

(1) Chapter VI ff.

(2) Ibid., p. 117.

(3) Ibid., p. 117.

Assuming, then, that buyers can be influenced by sales techniques and that the most common form taken by such techniques is Advertising, let us examine the way in which Demand can be affected. We have already pointed out that, for Advertising to have any impact on the market, it is necessary that both imperfect knowledge and "flexible" tastes, preferences and wants exist.

In the case of imperfect knowledge, Advertising can be employed to perform the useful function of informing potential customers of the range of products from which they can choose. Since, in many fields, people are ignorant of the comparative prices ruling in the market, or of the qualities of various goods or even of the existence of the goods themselves, informative advertising enables the sellers to draw attention to their own products, as well as, under certain circumstances, to benefit the consuming public by increasing the breadth of choice. At the same time, advertising of this type can be employed to misinform buyers as well, in that it can attribute to goods qualities which in reality do not exist. Basically, however, the result of advertising expenditure is to make the Demand curve for all products more elastic, since increasing awareness of the variety of products from which to choose will tend to reduce the "clustering" of buyers around a particular product merely because they know of no proper substitutes. The inelastic Demand curve, conventionally associated with product differentiation under conditions of imperfect knowledge (as opposed to product preference) flattens out in the lower price ranges as sellers are able to expand their markets through advertising expenditure. At the same time, advertising outlays increase costs, with the result that prices have to be raised sufficiently from "pre-advertising" levels.

Not only will the shape of the Demand curve be altered through the introduction of such selling expenditures, but the location will be affected as well. The fact that the market for products can be widened by the judicious application of advertising means that Demand curves may be shifted upwards and to the right.

Chamberlin also points out that advertising has the capacity to alter wants themselves⁽¹⁾. He distinguishes between this function and the fact that it can be used as a means of spreading information in the manner already described, and justifies this by suggesting that:

(1) Ibid., p. 119.

"An advertisement which merely displays the name of a particular trade mark or manufacturer may convey no information; yet if this name is made more familiar to buyers, they are led to ask for it in preference to unadvertised, unfamiliar brands."(1)

The principle underlying all this, is that selling techniques of certain varieties may be, and are, used on the potential consumer in such a way that his entire psychological make-up is brought into the picture and his attitudes are made susceptible to the influences exerted by the advertisers.

"They are not informative; they are manipulative."(2)

Another distinction which must be drawn, however, is that between the type of advertising undertaken by the manufacturer, and that undertaken by the wholesaler and retailer. For the manufacturer, advertising is somewhat more complex since he must bring his product to the attention of both the retailer and the final consumer, while the retailer is only concerned with the latter. The reasoning behind this is obvious. Since the manufacturer might be able to persuade consumers to buy his product, he must be able to persuade the middlemen to stock it, and vice versa. At the same time, it is likely that retailers, experiencing a heavy demand for a good which they do not stock, will attempt to obtain supplies from the manufacturer and in this way the latter will be saved the troubles of contacting distributors. This method, however, leaves much to chance. The advantage of establishing contacts with a wholesaler is that goods requiring a large number of retail outlets can be most adequately handled by those who know the maximum number of dealers. In addition to the costs incurred in encouraging wholesalers to sell a particular good, certain costs must necessarily arise in the process of persuading them to carry sufficient stocks of such goods to cater for anticipated demands. Wholesalers constitute the only group with facilities adequate for holding large stocks, but the cost (in the form of space and risk) of doing so must be borne by the manufacturers in the form of margins. In addition, the wholesaler will only be tempted to carry the product if assured of the demand for it. In order to encourage this, a strong advertising campaign with retailer and consumer is necessary.

(1) Ibid., p. 119.

(2) Ibid., p. 120

The manufacturer must also be aware of the strategic importance of the retailer. By refusing to sell a product for one reason or another, the retailer can effectively ruin the manufacturer's trade. For this reason, the manufacturer must provide the distributor with suitable incentives in the form of profit margins higher than, or as high as, those that the latter might be able to obtain from concentrating on other "substitute" products. Part of this process is the granting, by manufacturers, of exclusive agencies to retailers. The fact that this system protects distributors from competition and gives them all the benefits accruing from the sale of the particular line is a great incentive to stimulate sales efforts on the part of retailers.

An increasingly effective system is the operation of distributive outlets by manufacturers themselves. This technique of organization provides the producer with many of the opportunities and advantages which generally go to the retailer or wholesaler and he is at the same time able to ensure the fullest promotion of his product. The process operates in reverse as well, in that retailing firms have succeeded in securing cost and other advantages by either setting up their own supply network or arranging for manufacturers to supply goods to them in bulk and under their own trade names. At this point, the question of the integration of production with selling raises the issue of the difference between production costs and selling costs.

Using Chamberlin's definitions of selling costs - the costs of altering the demands of the consumer - and production costs - the "costs of satisfying them"⁽¹⁾ -, we may proceed to an examination of the analytical distinctions between them.

"Cost of production includes all expenses which must be met in order to provide the commodity or service, transport it to the buyer and put it into his hands ready to satisfy his wants. Cost of selling includes all outlays made in order to secure a demand, or a market, for the product. The former costs create utilities in order that demands may be satisfied; the latter create and shift the demands themselves. A simple criterion is this: of all the costs incurred in the manufacture and sale of a given product, those which alter the demand curve for it are selling costs, and those which do not, are costs of production."⁽²⁾

(1). Ibid., p. 123.

(2) Ibid., p. 123.

The distinction is not always clear. Chamberlin cites cost of Transportation as an example⁽¹⁾, in that it constitutes a cost of production, but it may also be regarded as a selling cost borne by the manufacturer as an inducement to the retailer to stock the good, or merely to bring his product into contact with the market. Rent is another example; a high rent, generally characterizing a well-populated shopping district, is the price which a distributor must pay in order to obtain the large volume of sales which such a location can bring. his attempt on the part of the seller to get as close to as many buyers as possible may be viewed as an adaption of product to market in the form of the provision of more convenient shopping facilities. Similarly, the seller who locates in a lower rent area and informs his clientele that for just that reason he is able to sell his wares more cheaply is adapting demand to the product.

"We arrive at another way of stating the distinction between the two kinds of costs: those made to adapt the product to the demand are costs of production; those made to adapt the demand to the product are costs of selling."(2)

Since economic theory as it stood prior to the preparation of the works on monopolistic competition had failed to take any cognizance whatsoever of the notion of selling costs, it provided no way of incorporating anything approximating an interpretation of the expenditure responsible for changes in the Demand curves. There was no need to, since Perfect Competition theory assumes homogeneity of product and large numbers of competitors while the theory of Monopoly implies a control of the market upon which no-one (even by advertising) could possibly encroach. The result was a body of thought which assured that demand merely existed and did not venture an explanation of the reasons why.

We have already indicated that the effect of advertising is generally to enable the seller to sell more of his products than he would without it, with the result that the Demand curve tends to shift upwards and to the right. This obviously means that, with advertising, he is able to sell more at any price than would have been the case otherwise. This raises the question of outlays on advertising. Up to which point will the seller experience increasing returns from his expenditure, and what will determine

(1) Ibid., p. 124.

(2) Ibid., p. 125.

this point? Since price is also an important variable in the sales analysis, the only way in which the value of advertising expenditure can be calculated is to keep price constant and vary the selling outlays. The extent of changes in demand will provide an idea of the returns from advertising, even though there might be minor variations in the reactions of the Demand curve over the range of possible prices.

The magnitude of advertising outlays and the combination of selling expenditures with the expenditures on factors of production such as land, labour and capital, will be a function of the size of the firm and its capacity to spend on such items, as well as of the nature of the product and the extent of its potential market. These factors, will, in turn, determine the medium to be used in the dissemination of information. A small corner shop will naturally find its advertising outlets more limited than will a large international organization. For the purposes of our present analysis, however, it must be assumed that expenditures are optimally combined and that, in each case, no greater returns could be obtained from the given outlays.

Continued expenditure by a firm on Advertising may produce a number of effects. Chamberlin has pointed out that certain forms of selling expenditure must be repetitive in order to provide results, and, up to a certain point, outlays may in fact be subject to decreasing returns - a situation which may only be corrected by a maintenance of such expenditure.⁽¹⁾ Alternatively the slow process of persuading consumers to turn towards a particular product may be accompanied by increasing returns, after which relatively fewer customers can be reached by advertising and the net result is probably decreasing returns.

The nature of advertising is such that it is frequently subject to the same laws as govern the production process. The principle of economies of scale is applicable to certain selling techniques in that the larger the outlay the better it can be organized and utilized. For example, a small firm might find it both unnecessary and financially impossible to support a specialized advertising manager, while the establishment of an advertising department is becoming an increasingly common feature of large scale organizations - the advantage being the fact that a trained specialist is obviously superior to a man who is required to be a "jack of all trades" in his own business. In addition,

(1) Ibid., p. 133.

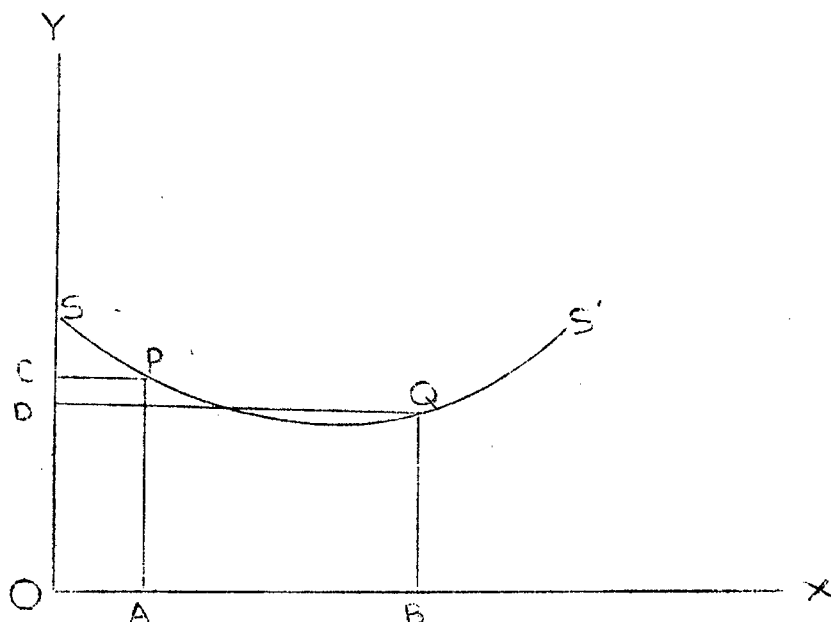
the point has already been made, that the larger the outlay, the greater is the access to all media, with the result that coverage is probably greater and more effective in terms of numbers reached.

There are, however, aspects of selling expenditures which are subject to decreasing returns. The effect, already mentioned above, of successive increments in outlays is frequently to reach fewer and fewer customers, or alternatively, to induce a given set of customers to resist the product in question and to weigh up more seriously the sacrifices which have to be made in order to purchase it. The result is that increased costs will have to be incurred in order to persuade the consumer to maintain his rate of consumption after a certain point has been reached. The rationale behind this process provides the reason for organizing selling expenditures in such a way that the most susceptible consumers are dealt with first, and only after they, as a market, have been saturated, is attention given to those potential customers with stronger sales resistance.

Under the conditions outlined above, it may be legitimately held that increasing returns will eventually be transformed into decreasing returns, in the sense that the former state will soon come to an end while the latter condition will, with the passage of time and the increase in selling expenditure, only become more amplified.

Let us now turn to an examination of Chamberlin's exposition of the matter.⁽¹⁾ He makes the point that the curve of Average Selling Cost per unit will indicate those factors discussed above i.e. whilst increasing returns are being experienced the curve falls until a minimum point is reached, after which diminishing returns cause a rise.

(1) Ibid., p. 136 ff.



Chamberlin employs the curve SS' to illustrate this and makes the assumption that costs of production are, for the moment, being disregarded. Costs of product are measured along the vertical axis, while product (in units) is measured along the horizontal axis.⁽¹⁾

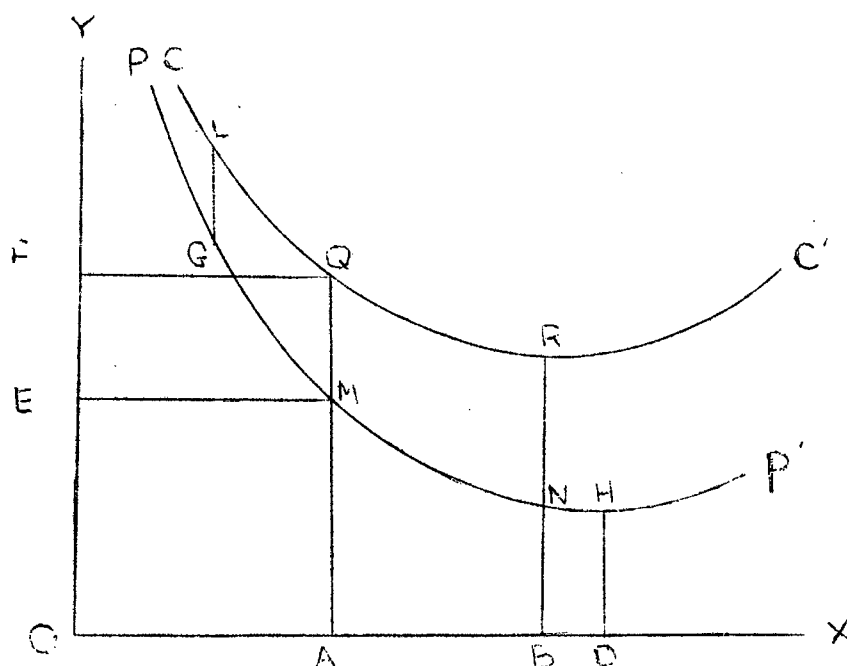
The area $OAPC$ indicates the total cost of selling OA units of the product, while AP indicates the average cost of selling the same quantity. The position of the curve will depend upon the nature of the product and the conditions surrounding its sale, as well as the type of substitutes available. These factors will also determine the shape of SS' and the exact point at which the upward turn begins. In order to draw the curve properly, these determinants must be isolated from the selling costs themselves and only the latter should be examined. The lower the price of the good, however, the lower the curve of Selling Costs will generally lie.⁽²⁾ The greater the range of substitutes, the poorer the quality of the good itself, the lower the price of competing goods (or the better their quality) or the larger the expenditure on their advertisement, the earlier will diminishing returns be encountered for the good under consideration. The result will be a minimum point lying further to the left.

Since it is not entirely practical to consider the viability of increasing or decreasing expenditure on selling without examining the costs of production of the product itself, the analysis is improved by combining the curve of Selling Costs (SS') with that of Production (PP')⁽³⁾.

(1) Ibid., p. 136.

(2) Ibid., p. 137.

(3) Ibid., p. 138.



We have already discussed the PP' curve and it requires no elaborating at this point. The curve CC' may be used to represent the Cost of Selling plus the Cost of Production for each of a number of units, so that the difference between the curves CC' and PP' constitutes the cost of selling alone. Taking the previous example, for output OA , cost of production per unit is given by AM ; cost of selling per unit is MQ ; and the combined cost of producing and selling per unit is AQ . Similarly the total cost of producing OA is $OAME$; of selling it is $EMQF$ and the sum of both total production and selling costs is $OAQF$. It will be noted that the minimum point on CC' does not necessarily correspond to the minimum points on either PP' or SS' .

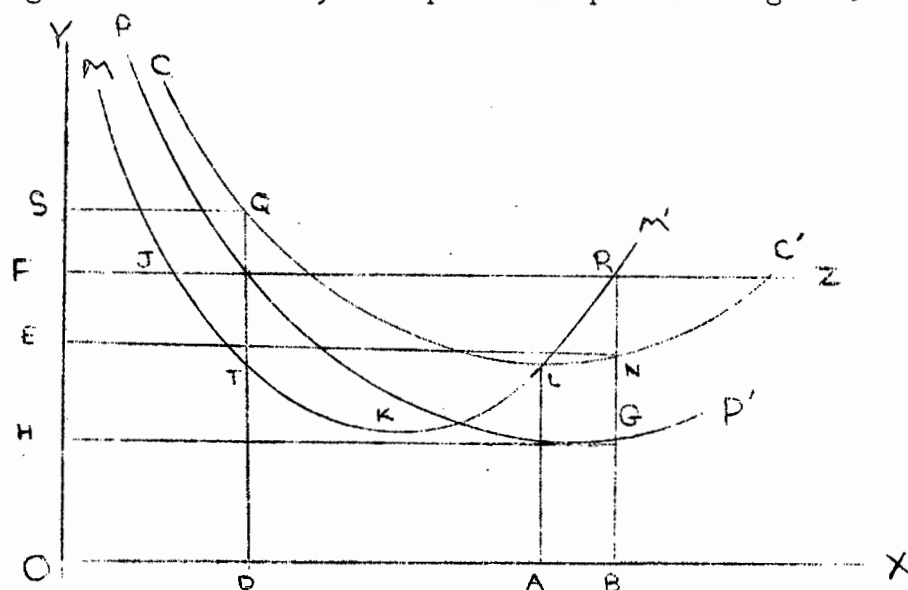
Chamberlin also introduces a curve of Combined Marginal Costs.⁽¹⁾ This merely indicates the addition made to total costs by the production of each extra unit. At this stage, however, it will not be required in the analysis.

We may now proceed to an examination of the equilibrium situations similar to those studied earlier. In the first case we will turn our attention to the conditions of individual equilibrium and subsequently to those pertaining to group equilibrium. The distinction in this situation will be the fact that selling costs are now being considered.

We assume that the prices and advertising outlays for substitutes are given, and that the products themselves do not change. In order to maximize his profits, the individual seller may adjust price, product or selling outlays, or all three together. As was the procedure in the earlier analysis, each of these variables

(1) Ibid., p. 138.

will be considered separately, on the assumption that the others remain constant. In the first example selling outlays will be regarded as variable, with price and product as given.



In the above diagram PP' is the curve of Cost of Production, and the combined curve of Average Cost of Production and Selling (assuming naturally that price is given) is CC' .⁽¹⁾ The point on the CC' curve is AL , and price may lie either above, below, or on the same level as this point. Assuming for the moment that it does, in fact, lie above this point (at OF), the line FZ may be drawn parallel to OX . Where CC' lies below this line, the distance between the two will indicate the profits prevailing per unit of output, and total profit will be reflected by this distance multiplied by the relevant output. The point at which the total profit area is largest is OB (since $ENRF$ is a maximum between CC' and FZ), and this will constitute the most profitable output under the circumstances. For this output to be sold, the total selling cost will be $HGNE$ (total production cost is $OBGH$). Any expenditure on advertising of a sum either larger or smaller than $HGNE$ would be less profitable.

If we assume that the price lies lower than it did in the above example, and at a level exactly equal to AL (the minimum point on the Combined Cost curve), the selling expenses would just be sufficient to sell OA . At this point, only normal or minimum profits will be made and there can be no surplus. On the other hand, if price lies below AL , the firm will be operating at a loss and production would, under normal circumstances, and providing that no other adjustments are possible, be discontinued.

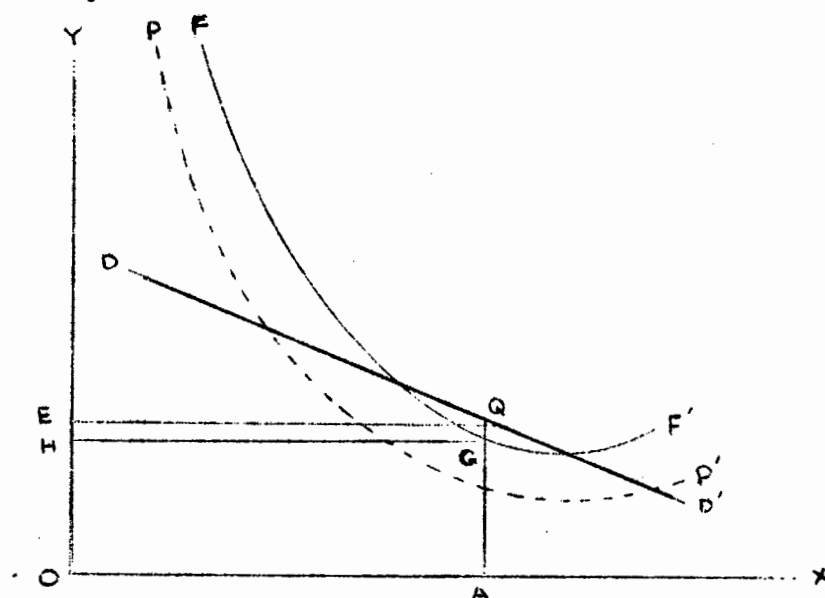
(1) Ibid., p. 142.

The second case is that in which price is adjustable and the other variables remain constant. Since the reasons for a stable selling outlay have not yet been discussed⁽¹⁾, they may be explained by the fact that a firm might budget for a specific level of expenditures well in advance, and find it impossible to vary it at a later stage. Alternatively, the level might be determined by

"...habit or inertia on the part of the individual entrepreneur, or by generally accepted trade practice."⁽²⁾

In such a case, the elasticity of the curve SS' may be regarded as unity, since selling costs will be evenly distributed over the entire output. The CC' curve possesses the same shape as the PP' curve - falling to the minimum point and rising subsequently. At the same time the minimum point of CC' is located further to the right than the minimum point on PP' .

In order to select the most suitable price to charge, the entrepreneur's Demand curve DD' must be inserted into the diagram.⁽³⁾



The slope and position of such a curve will obviously be a function of the "monopoly" characteristics of the product as well as the nature of the product itself and the amount of the selling expenditure made for it. Chamberlin proceeds to a new curve - the curve of "combined producing and selling costs"⁽⁴⁾ annotated by FF' (instead of CC'). The distinction between this curve and the curve previously discussed is simply that, for the latter, it

(1) The possibility of, and reasons for, a stability of either "product" or price have been discussed above.

(2) The Theory of Monopolistic Competition, p. 143.

(3) *Ibid.*, p. 144.

(4) *Ibid.*, p. 145.

was assumed that the cost of producing and selling each amount of product, at a given price, could be indicated by CC' , while, for the former, it is assumed that, since selling costs are fixed, they must be distributed evenly over the entire output (hence the notation FF'). In order to provide the maximum profits, price will be AQ , sales OA , total combined costs $OAGH$ and total profits $HGQE$. Without going into unnecessary detail it may be assumed that the area of profits and the optimum price will change with a shift in the position of the DD' curve. At any point further to the left of a position of tangency between DD' and FF' production would, in terms of our preceding analysis, be discontinued.

If we now consider "product" only, as a variable it is necessary to assume price and selling outlay to be given. The producer in this case will be required to decide the nature of the product which will maximize his profits. Demand will be a function of all the variables already discussed (price, product and selling outlays for the good itself and its substitutes), and the optimum "product" will be selected on the basis of profit yields. This does not imply that the "product" with the lowest combined cost or greatest demand is the one which is selected.⁽¹⁾

Group Equilibrium: Chamberlin employs the same assumptions in his discussion of group equilibrium with selling costs as he does when referring to equilibrium without them.⁽²⁾ This implies that he does not, in his initial analysis, recognize the fact that the Cost and Demand curves may vary between products and that the acceptance of uniformity in this regard is a simplification. At the same time he is aware of the disadvantages of making the assumptions and attempts to clarify the conditions surrounding producers at a later stage. He also points out, however, that there is some justification in assuming relative consistency of characteristics:

"Markets are often fairly uniform in composition, consumers' preferences fairly evenly distributed, differences between products such as to give rise to no marked differences in cost, and selling methods stable and unsensational. Where these things are true, our assumptions are sufficiently realistic to make the results of some direct applicability."⁽³⁾

If we were to consider first the small group i.e. that in which each producer is capable of making incursions into the

(1) See discussion above.

(2) The Theory of Monopolistic Competition, p. 149.

(3) *Ibid.*, p. 150.

markets of his competitors and which is thus characterized by action and reaction patterns, we are faced with the problem of determining the impact on his competitors of the use of selling outlays by the individual producer. Since this is best left till later we will confine our attention to the situation in which the group is sufficiently large to permit the individual to advertise without severely affecting his competitors and, therefore, without inducing them to retaliate either through price cutting or advertising. At the same time we run into another problem. In our previous discussion of the question of size in relation to the group, we distinguished only between "large" and "small" groups - and did so on precisely the basis we have just mentioned. In this case, however, - when we are dealing with selling outlays - it is possible that the "large" group need not be as large as it would have to be without selling outlays. Without indulging in quantitative comparisons we may explain the distinction according to Chamberlin's argument.⁽¹⁾ He points out that the best examples may be taken from situations in which the seller either cuts his price, or advertises. If he cuts his price (as would be the case where there is no allowance for selling outlays) he increases his business by reducing the number of customers patronizing his rivals. At the same time, he will attract other consumers who heretofore have had no loyalties as far as the particular product is concerned and are, in fact, buying it for the first time only because the price has been reduced. Were this not the case "the demand curve would always be a perpendicular line".⁽²⁾ The same situation applies to advertising. If he advertises, the producer will attract both customers new to the product and new to himself (in the sense that they had previously bought elsewhere). Obviously the effect of the entire group either advertising or cutting prices will be to increase demand for the product far more than could an individual producer.

We shall now turn to an examination of the processes by which sales may be increased for the group as a whole, through the use of advertising. Chamberlin's argument will become more clear.

As already shown, Chamberlin initiates his discussion by pointing out that there is a distinction between the effects of advertising on the members of the group and the effects on those

(1). Ibid., p. 151.

(2) Ibid., p. 151.

outside it.⁽¹⁾ The reasoning behind this lies in the fact that for any one product there are a number of imperfect substitutes as well as general substitutes, and the

"...increased market of any one producer is derived not alone from the markets of the closest substitutes for his products, but from the markets of all substitutes (i.e. from the markets of all other products)."⁽²⁾

At the same time it should be realised that the nature of the advertising and the sector of the market at which it is directed will play an important part in determining the influence which it will have. If, for example, the advertising is aimed at persuading those who buy the product anyway to buy a specific brand of it, there is less likelihood that it will also succeed in attracting many entirely new buyers, although generally at least a small proportion of such new demand will be an inevitability as people are made aware of the existence of the type of product. Similarly, a good deal of advertising is currently directed at potential buyers rather than old established ones, since the former can frequently be more easily persuaded to buy a particular brand of the product while the latter possess preferences which cannot be altered sufficiently to warrant the outlay.

As far as the effect of advertising on the group itself is concerned, Chamberlin points out that there will naturally be (for the seller who advertises) "a readjustment in his favour of the sales total of the group."⁽³⁾ The question arises, however, as to whether this will necessarily result in a loss of sales for each of his competitors, and the conclusion would appear to be that

"...it is, in general, impossible for the advertiser to direct all of this new demand to himself: he attracts it in his direction but a part of it is dropped to his competitors on the way. When the automobile manufacturer describes the satisfactions to be had from motoring and suggests the purchase of his car in order to realize them, most of those influenced may investigate his product first but few will buy without looking at others, and many will end by purchasing elsewhere."⁽⁴⁾

(1) Ibid., p. 151.

(2) Ibid., p. 151.

(3) Ibid., p. 152.

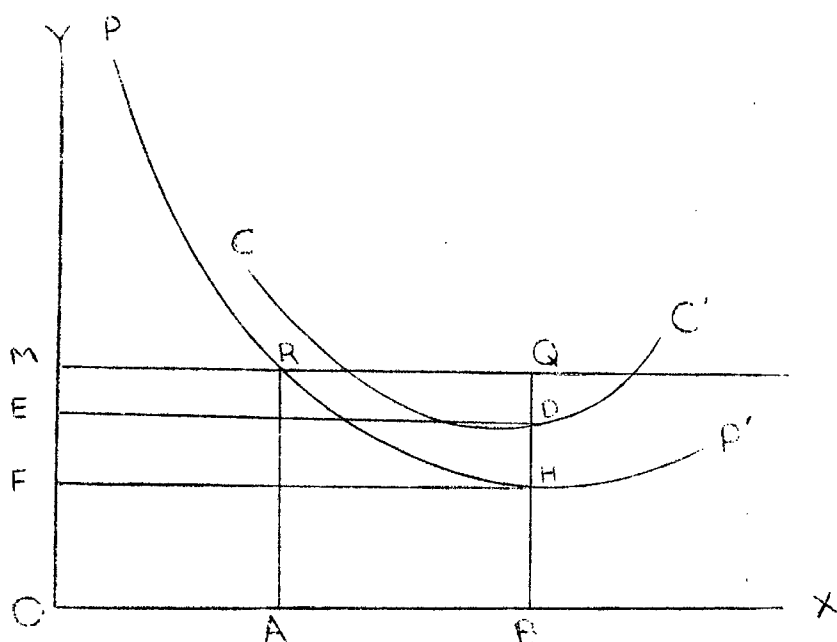
(4) Ibid., p. 152.

In this way, the advertising instituted by an individual member of the group serves to attract buyers to the entire group, and it is extremely difficult to analyse the complex relationships which arise. It is, for example, difficult to ascertain in advance whether advertising would be more or less valuable to the individual producer within a group producing a relatively undifferentiated product, since any new demand created would be shared out amongst all the producers to a greater extent, and there would also be less well established preferences which the individual advertiser would **have** to counter in his attempt to gain customers from his competitors. At the same time, were the product to be relatively homogeneous advertisers would be not so much concerned with attracting potential customers for the product as a whole, as they would be with trying to gain those already attracted to their rivals. Naturally the probability that this will in fact be done will depend upon the size of the group, since the larger the number of competitors, the greater the advantage (in terms of potential markets) will be.

Returning to our original proposition that the size of the "large group" need **only**, in fact, be quite small relative to that required to fulfil the conditions of competitive non-interdependence in the case of pure price or product competition, it will become clear that this is indeed the position. If all competitors advertise, each will be protected to a large extent from the incursions of his rivals by the facts that (a) he will be able to keep customers he might have lost if he did not make such selling outlays although (b) he will lose some to his competitors as a result of the natural processes of persuasion and (c) he will gain some from his rivals as well as from outside the original group (i.e. those attracted by general intra-group advertising).

At this point in the analysis, Chamberlin introduces the question of advertising by sellers in other groups but points out that his arguments have only been developed to include the adjustments within the group itself.⁽¹⁾ The advantage of this technique is that the analysis can be applied to systems of interdependent groups as well as to the question of general equilibrium.

(1) Ibid., p. 154



In the above diagram⁽¹⁾ PP' is the Cost of Production curve for the individual producer, OA is his output and OM his price. Since all sellers are producing the same output, total sales by the group as a whole will be OA multiplied by the number of competitors. Under these circumstances, profits prevailing within the group are at the minimum necessary to maintain production and to prevent both an influx and eflux of sellers. The combined Cost curve CC' represents the costs of producing and selling at price AR for each producer. Chamberlin indicates that the CC' curve is drawn on the

"...assumption that the selling outlays of all others except the single one who advertises are held constant."⁽²⁾

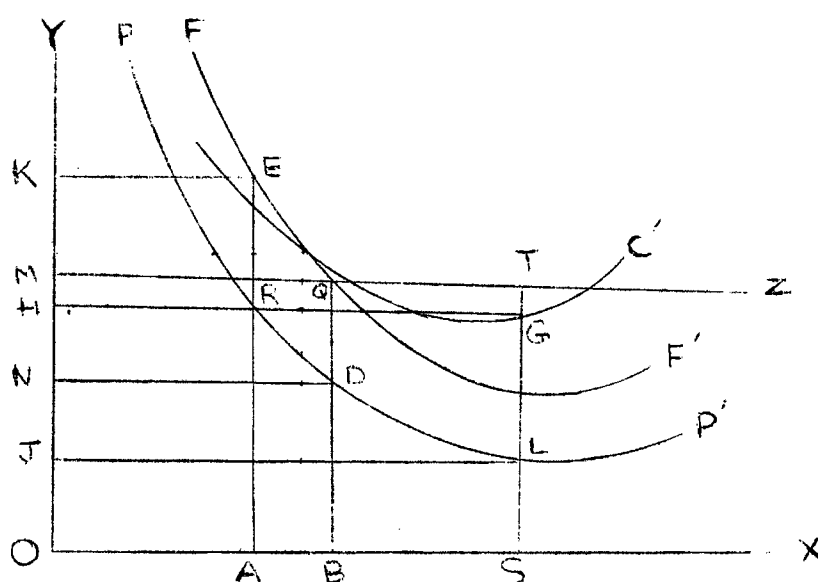
In this case he assumes that they are held constant at zero - implying that no-one else advertises. The most suitable position for the producer represented in the diagram above would be one in which he would make total selling outlays of FHDE, thereby increasing his sales to OB, making additional profits of EDQM and lowering his unit production costs from AR to BH. The effects on his competitors might be either to increase, decrease or leave their markets the same - depending upon the nature of his advertising. Since each seller can increase his market by advertising, in the same way as, in our earlier analysis, each seller could increase his market by cutting his price while others kept theirs constant, the incentive to do so will be strong and there is no justification for believing that all competitors but one will hold their selling outlays constant at

(1) Ibid., p. 155.

(2) Ibid., p. 154.

zero. In the above diagram the CC' curve was drawn on the assumption that profits of EDQM were possible only for one seller, and also, that he was the only advertiser. Since, however, when all members of the group advertise, each expands his sales by taking customers from his rivals, it is quite possible that for each, sales will remain steady at OA , and there is a tendency for the selling efforts of all within the group to cancel out.

In the following diagram (1)



the total expenditure of each seller is $MREK$. PP' possesses its customary characteristics and FF' indicates that selling outlay is fixed and therefore independent of volume. $NDQM = MREK$ as well as any rectangle drawn between PP' and FF' .

Chamberlin indicates that the distinction between FF' (in this diagram) and CC' (in the previous diagram) must be noted.

"The latter shows by its distance from the base line the cost to one firm of producing and selling different volumes on the assumption that the selling outlays of the others remain constant (as originally drawn, since no-one was advertising as yet, they remained constant at zero); the former shows by its distance from the base line the combined cost of producing and selling different volumes of product on the assumption that all producers in the group carry their selling outlays to a given total amount." (2)

(1) Ibid., p. 157.

(2) Ibid., p. 156.

MREK indicates both the total expenditure on advertising of each of the sellers, and the amount of his losses whilst there are too many sellers in the field. (Total Revenue for each is shown by the area OARM and Total Cost is OAEK). Assuming that, in fact, there is no exit from the group by any of the sellers, Chamberlin employs a device to show that, by increasing their expenditure on advertising, the sellers are able to escape their losses.

He originally drew the curve CC' for a single seller on the assumption that all his rivals maintained theirs at a constant. He now drops this assumption and selects conditions under which all producers but the individual in question are keeping their selling outlays at MREK on FF' . Since such advertising is sufficient to achieve the sale of OA units of output, the curve CC' now passes through E on the curve FF' , lying below it to the left of E and above it to the right. The implication is that the individual seller will now have to spend more on advertising than his rivals, if he wishes to sell more than they, and need spend less if he does not wish to sell as much as OA. CC' may dip below the price line MZ. If it does not, losses may still be reduced if further selling outlays are made, but there is no possibility of increasing profits. If, on the other hand, CC' does move below MZ, an outlay on selling of JIGH will produce a profit of HCTM. Output would increase to OS, costs of production would be reduced to SL, selling costs per unit to LG, and profits per unit to GT.

The advantages of increasing advertising expenditure in situations like this, will become evident to all sellers, and the net result will be that both FF' and CC' are moved upwards and to the right. When it is obvious that the individual cannot improve his position any further by moving along CC' to the right, the selling outlays will cease. According to Chamberlin this will be the case where

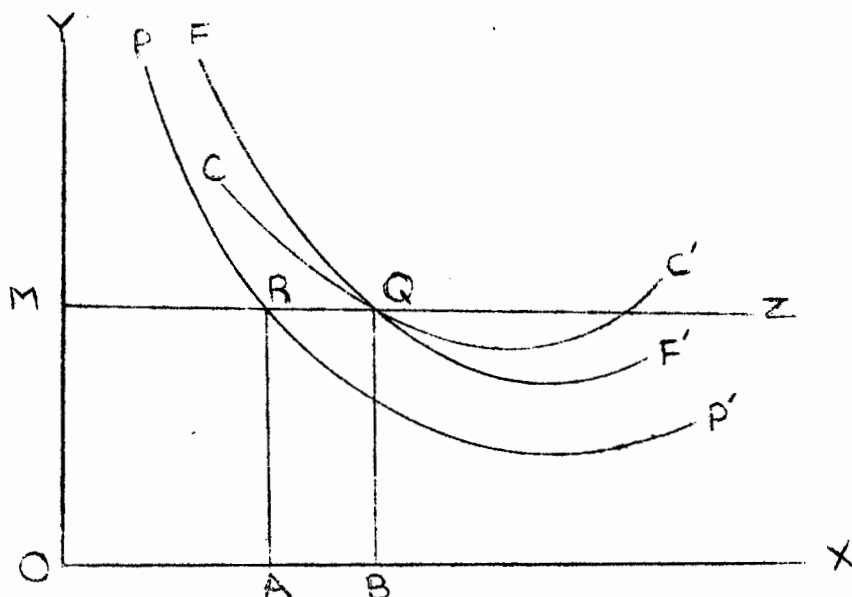
" CC' had moved upwards and curled backwards so that the optimum point on it coincided with the point of intersection of CC' and FF' ."(1)

At this point, however, owing to the fact that FF' is now lying higher than it did originally, the individual producer is incurring losses of the kind indicated by the area MREK. In order to eliminate this difficulty, the only alternative is an eflux from the group of some of the producers, and a subsequent

(1) Ibid., p. 158 note.

distribution over the remainder, of the markets which they had held. As this movement out of the group takes place, there is an increase in the size of the markets belonging to those left behind, with the result that there is a fall along the curve FF' . After a while costs will be equated with price and there will no longer be any losses as soon as the output of the group as a whole has increased to OB . Chamberlin points out, however, that here the equality of cost and price will not be stable.⁽¹⁾

He provides the following diagram⁽²⁾

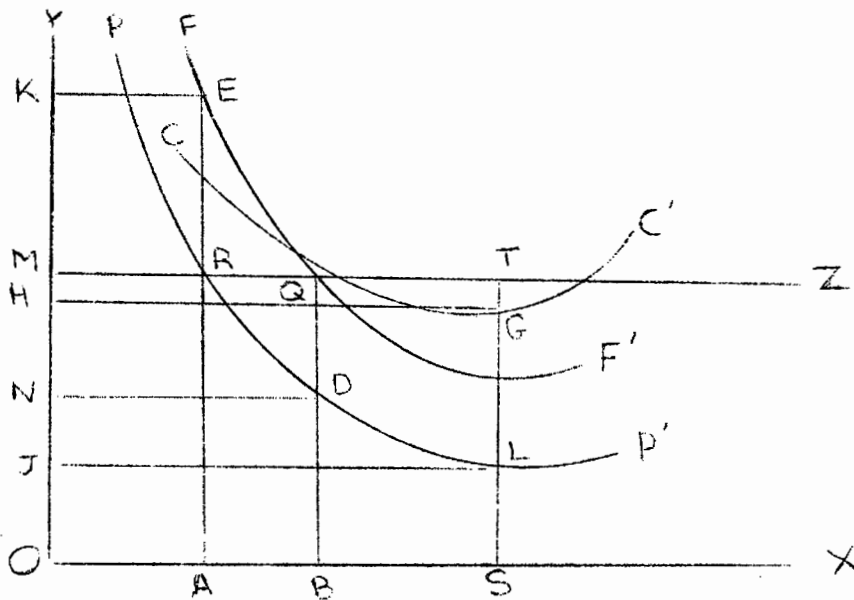


to show that, if CC' is drawn through Q (since there are now fewer sellers) it is possible to show how much an increase in profits each seller could expect from further expenditure on selling. As soon as each and every seller initiates such expenditure though, profits turn into losses as a result of the movement to the right of FF' . Once again firms leave the group and the entire process is repeated. There will be a corresponding movement of CC' as well when advertising is increased and both CC' and FF' will always intersect on MZ . The process will reach equilibrium when CC' lies at a tangent to the price line (MZ) and this will naturally correspond to the point where the former intersects FF' .

(1) Ibid., p. 159.

(2) Ibid., p. 158.

the selling outlays was only considered on the basis of its influence within the group itself, and, as has already been pointed out, no attention was paid to its impact on the sales of the general class of product. Returning to our diagram, we remember

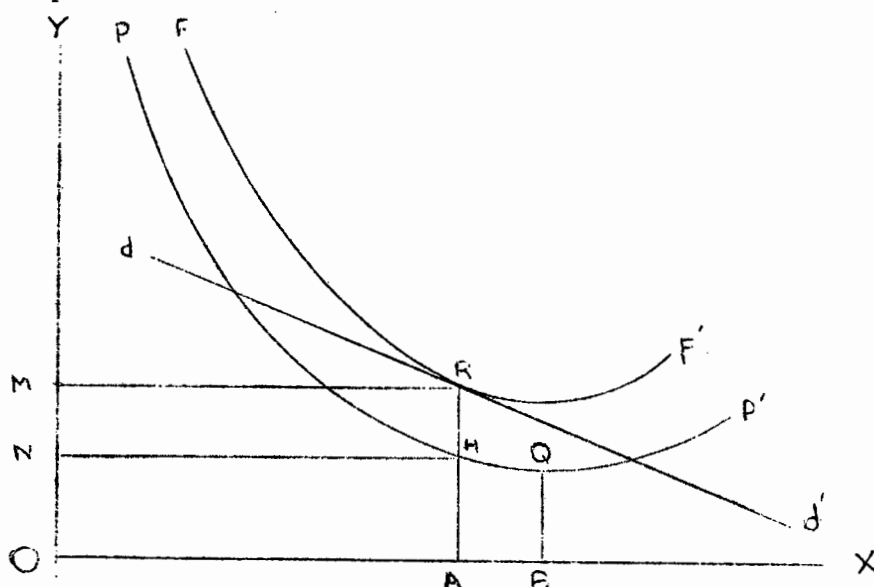


that it was shown that the net effect of a general increase in selling expenditure was to cause losses of MREK. As firms left the industry, MREK was reduced and sales were increased for each from OA to OB. If we now assume that such selling expenditure increases the group's total sales, and that, as a result, each seller is provided with a market sufficiently large to absorb a quantity slightly greater than OA, but not as much as OB, the equilibrium adjustment can be brought about with a smaller exodus of sellers. If, on the other hand, output of each is as high as OB, there will be no need for any sellers to leave the field because at this point selling costs will be covered. It is even possible that the output of each may exceed OB, so that new competitors will actually enter the industry as a result of the attraction of the "excess" profits being experienced. From this it should be obvious that, where selling outlays increase the sales of the general class of product, the equilibrium adjustment will require special analysis. Another observation which is significant in this regard, is the fact that an expansion in the size of the market, resulting from an increase in advertising expenditure, will take place at a faster and faster rate up to a certain point, and the selling cost per unit will correspondingly fall more quickly than previously. This will cause the lowest point on the curve CC' to lie further to the right than under those conditions where increased selling outlays had no effect on the total sales of the product itself.

Chamberlin proceeds to an examination of the "second phase of the group problem"⁽¹⁾, in which the advertising expenditure and the "product" are regarded as fixed, and competition is now carried out on the basis of price. In order to do this he utilizes the PP' and FF' curves for the individual producer, bearing in mind the fact that the latter shows only the

"...unit cost of producing the corresponding (to any ordinate on the curve) volume of goods, plus its proportionate share of the fixed selling costs."⁽²⁾

The positions of the two curves do not alter.⁽³⁾



The nature of the analysis is very similar to that undertaken earlier, since the only distinction lies in the fact that selling costs have now been introduced.⁽⁴⁾ However, in our previous analysis, it may merely be assumed that selling costs are kept at zero while in the present case the divergence between PP' and FF' characterizes a situation in which these outlays are constant at a value greater than zero. Equilibrium is now achieved when the curve dd' is a tangent to FF' and where output and price are OA and AR respectively. Unit costs of selling and production are HR and AH respectively and together give a combined unit cost equal to the price. Total production, selling and combined costs for all units are $OAHN$, $NHRM$ and $OARM$ respectively and the latter is exactly equal to total receipts, so that normal profits prevail. Equilibrium would be achieved by the conventional

(1) Ibid., p. 162.

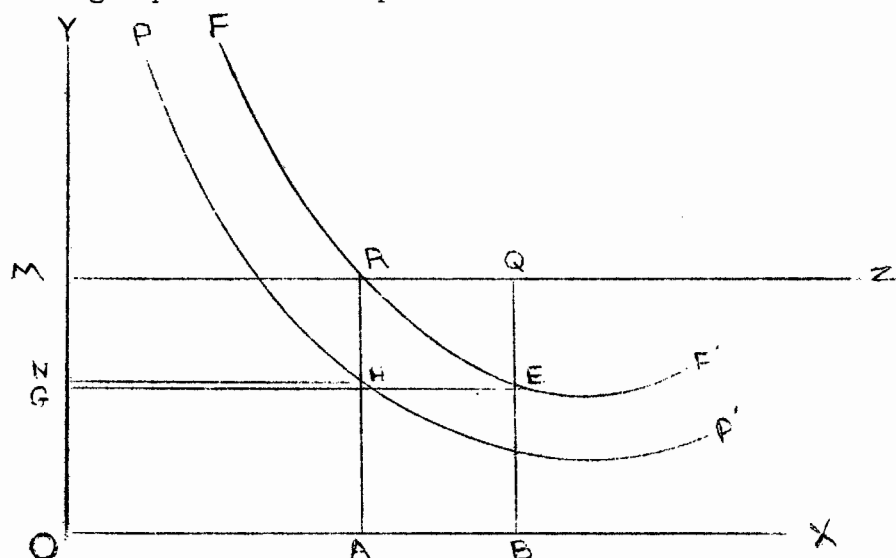
(2) Ibid., p. 164.

(3) Ibid., p. 163.

(4) See above.

adjustment of producers within the industry. If, for example, the market and price enjoyed by each were greater, so that the dd' curve lay above the point of tangency with FF' and to the right of the position of ultimate equilibrium, there would be an influx of competitors and the curve dd' would be forced downwards and to the left so that the adjustment would take place. Similarly, if the situation were characterized by the opposite set of conditions, there would be an eflux of producers until equilibrium was achieved.

Chamberlin's final analysis of each separate variable in turn deals with variations of the "product".⁽¹⁾ In this case selling expenditure and price are held constant.



In the diagram⁽²⁾ OM is the fixed price while PP' and FF' represent the same factors as was the case earlier. It has already been observed that a change in the "product" itself generally results in a change in the costs of production as depicted by PP' .⁽³⁾ Equilibrium can obviously also be achieved in the type of analysis we are dealing with, when excess profits have been eliminated and there is no tendency for producers to enter or leave the industry. In this case, therefore, it will be attained where output is OA , since here the curve of Combined Cost, FF' , will intersect MZ , the price line. Any output either greater or less than OA would have the effect of increasing or decreasing profits, with the result that competitors would be drawn into, or "pushed" out of, the industry.

Chamberlin also discusses the nature of the equilibrium adjustment when the operation of all three variables - price, "product" and selling outlays - are considered together.⁽⁴⁾

(1) The Theory of Monopolistic Competition, p. 167.

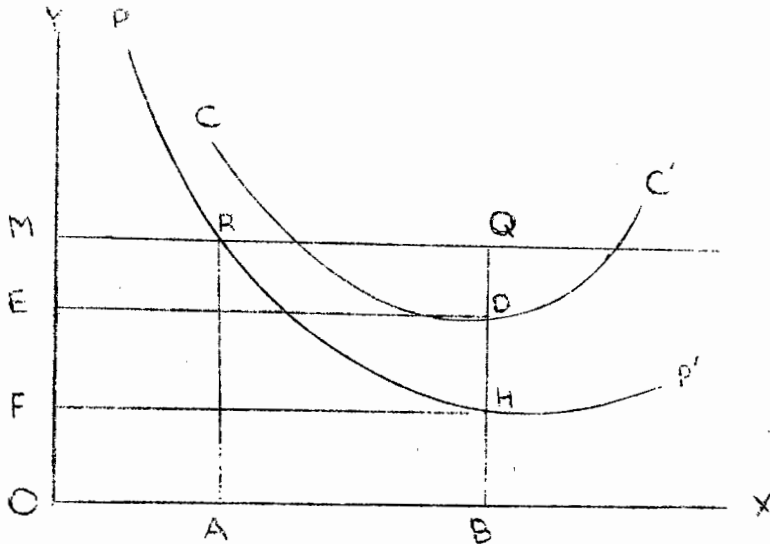
(2) Ibid., p. 168

(3) Above.

(4) The Theory of Monopolistic Competition, p. 169.

This process merely entails the addition of the optimum adjustments for each of the variables and the assumption that any excess profits will be competed away by the entry of new sellers and that any losses will be eliminated by the eflux of existing competitors.

Thus far we have been concerned with the analysis of the behaviour of the "large group". Turning briefly to a study of the "small group" and selling costs, and to our earlier diagram



we observe a number of differences. If the output of each seller is OA and the number of competing producers is smaller than in the examples we had been considering earlier, the situation will be one in which each competitor will be aware of the fact that his actions will have repercussions in the market and cause his rivals to react in order to protect themselves. Since all competitors are aware of the implications of their actions, it is quite possible that none will advertise if they are not doing so already, for fear of encouraging their rivals to do the same and causing all to lose ultimately. Chamberlin concludes that

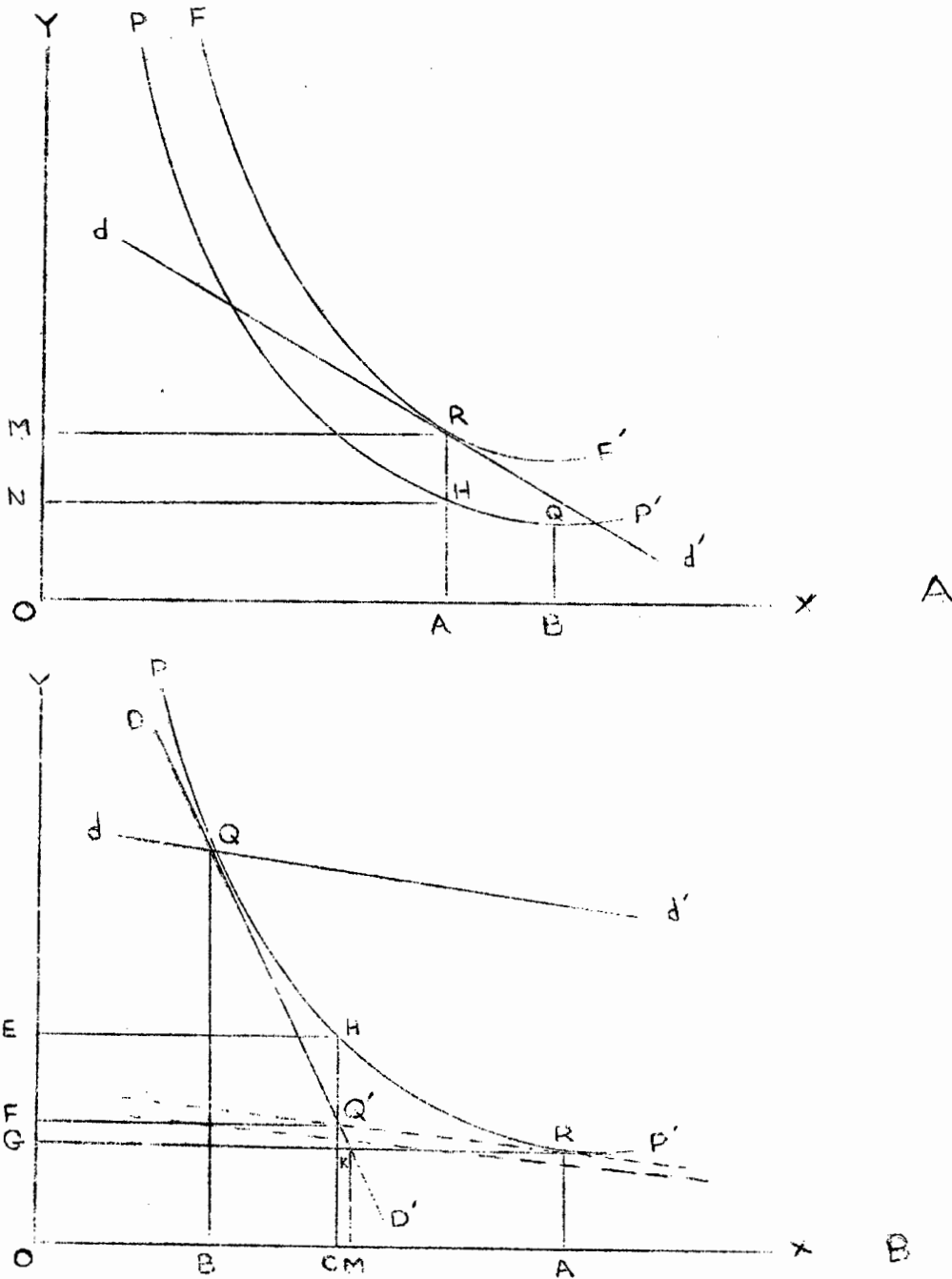
"...the argument is analogous to that presented...relative to price competition, and leads to a similar conclusion - that, where numbers are small, competition by means of advertising may be cut short even though the possibility exists for any one producer to increase his profits on condition that the selling outlays of the others do not change."(1)

It is possible, on the other hand, that advertising outlays will be undertaken in spite of the competition prevailing, simply because sellers are interested in making short-term profits rather than establishing safe long-term business. The possible reasons for this sort of behaviour have already been discussed in the context of price-cutting.⁽²⁾

(1) Ibid., p. 170.

(2) See above.

Much that has already been discussed in the section on price competition without selling outlays, may be applied to the present analysis.⁽¹⁾ The question of excess capacity, for example, arises here. Taking two of our earlier diagrams



and examining them in turn, it will have been observed that in the first case dd'

"...represents the demand at various prices for the product of any one seller on the assumption that the prices of his rivals...remain constant while the price adjustments are made."⁽²⁾

(1) See above.

(2) The Theory of Monopolistic Competition, p. 171.

In the second case, the assumption is the same, but the assumption of constant values is widened to refer to his selling outlays and those of his rivals. If the DD' curve of A were drawn into B, so that it would be possible to represent the demand facing any single competitor on the assumption that the reaction of his rivals' price changes to his own are instantaneous. This curve would be more inelastic than the curve dd' and it will be a tangent to FF' at a point further to the left of, and higher than, R. Further, a scale of production smaller than that reflected by OA will prevail and there will be more producers than under the conditions depicted in B. If the elasticity of DD' in both figures is the same - implying that advertising has had no effect on it, the scale of production will obviously be larger with than without advertising.

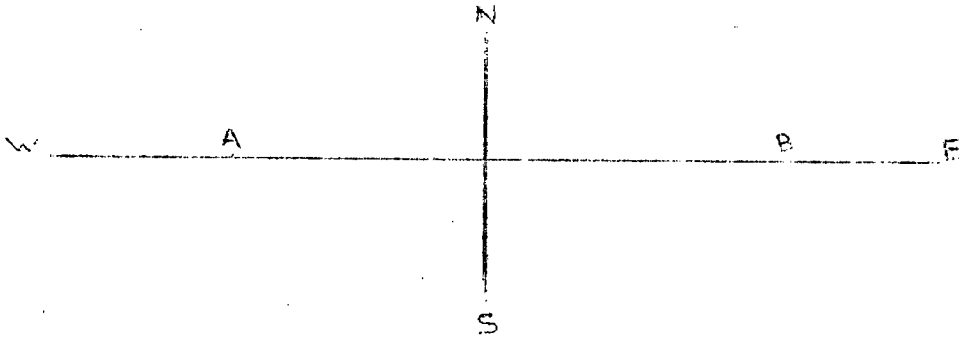
"Whenever price competition functions imperfectly then, it seems likely that advertising diminishes the discrepancy between the actual and the most efficient scale of production. But total costs and prices are higher. Selling costs per unit are greater than the decrease in production costs. The resources expended to achieve this result are therefore greater than those saved by achieving it. And, of course, the balance of excess capacity remains."(1)

In an article entitled 'The Influence of Marginal Buyers on Monopolistic Competition'⁽²⁾, A.J. Nichol criticizes Chamberlin's use of continuous Demand curves and his neglect of marginal buyers. He uses Hotelling's basic model in which two sellers are initially located equidistant on either side from the centre of a street, while buyers will purchase from either one on the basis of price and transport cost. All buyers located along a line bisecting

(1) Ibid., p. 172.

(2) Quarterly Journal of Economics, November 1934.

the street in the centre such as NS will be marginal in respect of the two sellers when prices are equal and a few will be marginal where NS lies nearer to either A or B if this results in price differences equal to differences in transport costs.



The knowledge that buyers are impartial between either of the two sellers may have the result of (a) inducing competitive price-cutting which must eventually ruin trade, or (b) causing the sellers to refrain from such harmful activity by creating conditions under which both might live in long-term harmony.

This failure, according to Nichol, on Chamberlin's part, to consider the importance of marginal buyers in determining the policies of sellers, also leads him to a view of the Demand curve which is not quite valid. Where products are differentiated, Chamberlin assumes that the Demand curve is continuous, running downwards from left to right. This

"...implies at all times an absence of any appreciable number of marginal buyers."(1)

It therefore implies that, where price is raised slightly above the general price level, sales will fall off by a small amount only - which would seem to indicate that marginal buyers play no significant role.

Nichol suggests that

"...in spite of the ballyhoo of salesmanship and advertising, in spite of superficial differences in packaging, trade-marks, service, location, some buyers may recognize a fundamental uniformity in two or more competitive offerings. Other buyers may be marginal simply through dullness or

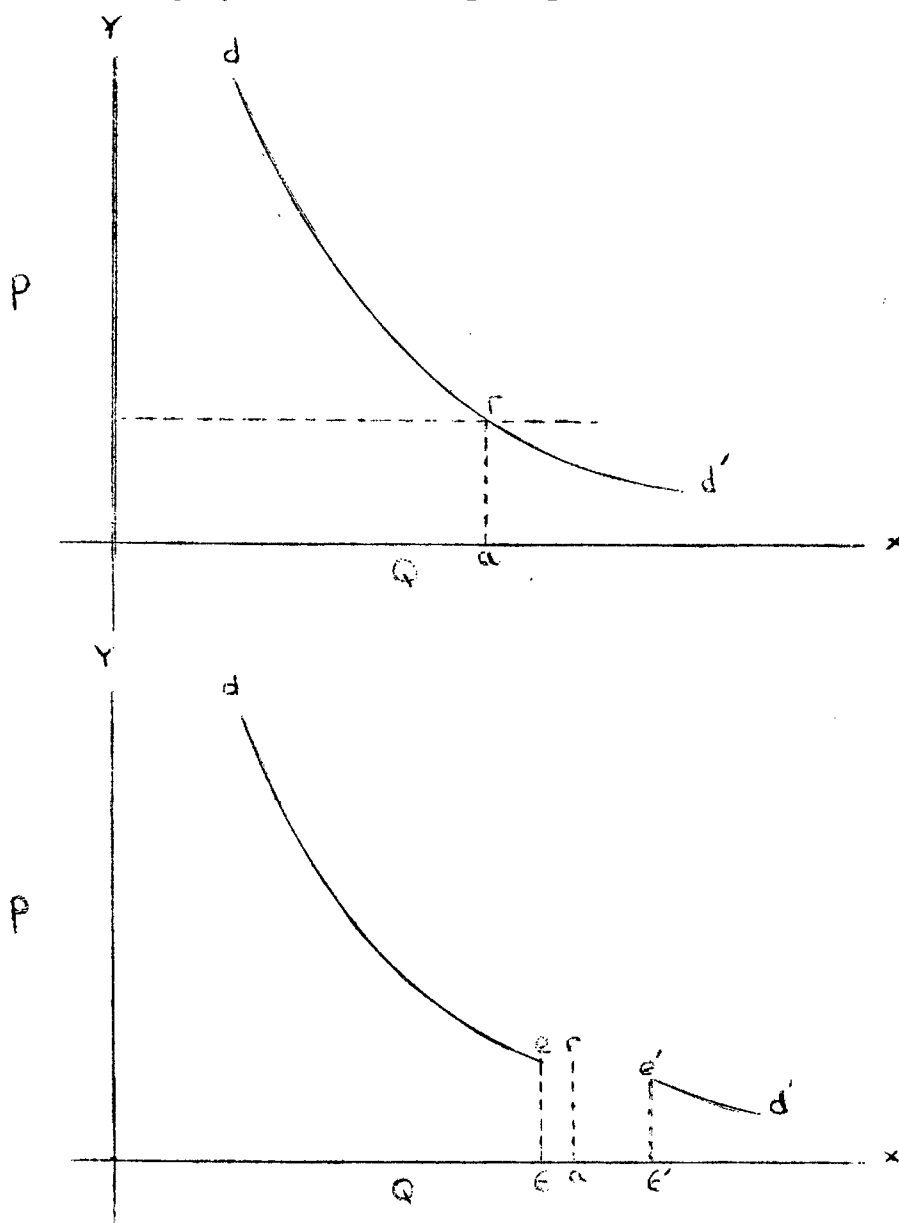
(1) Ibid., p. 123.

carelessness. All products to these buyers may not have identical utility, but some at least may possess equivalent utility."(1)

He points out further that

"...still other buyers may be marginal in another significant sense. They may really prefer one particular product, but not have money enough to buy it when its price rises above the prices of others."(2)

Whatever the reasons for their behaviour, marginal buyers will be characterized by a tendency to change from one product to another when price differences arise, and whilst such changes may be undertaken more rapidly in certain cases than in others, the net effect will be to alter the ultimate shape of the Demand curve. Nichol employs the following diagrams⁽³⁾



(1) Ibid., p. 123.

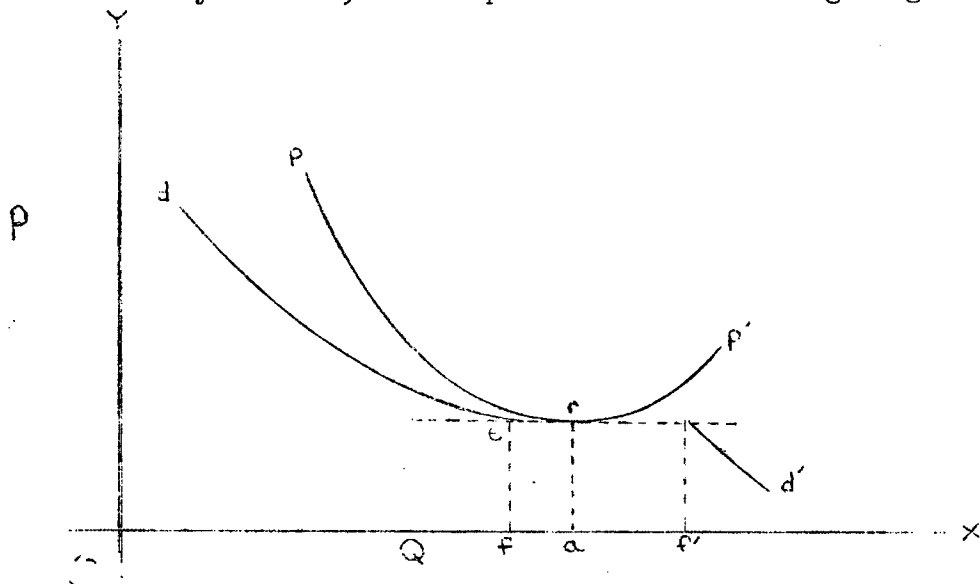
(2) Ibid., p. 123 note 5.

(3) Ibid., p. 124 ff.

in order to indicate the significance of marginal buyers. If we assume that all products within the range of competing substitutes are for the moment being sold at the price RA , and that the so-called marginal buyers are purchasing one-tenth of the total sold output of a particular product (i.e. one-tenth of the quantity CA), any rise in price of that product, no matter how small, over the prices prevailing for other products, will cause established customers (i.e. non-marginal) to reduce their purchases slightly. This is implicit in Chamberlin's analysis. Marginal customers, however, will cease buying the product altogether and will transfer their custom elsewhere. The result is that, at price EF (above RA) total purchases will be "somewhat less than nine-tenths of the original quantity."⁽¹⁾ Nichol further suggests that, at still higher prices, additional groups of marginal buyers will be affected and demand might decrease even more significantly.

From the method of presentation it should be fairly obvious what is meant by the discontinuity which materializes. This "gap" in the curve will become evident where there are price reductions as well, since although under such circumstances established customers will increase their purchases slightly, marginal buyers will be attracted away in large numbers from their alternative sources and the gain in sales will be from oa to of' (i.e. larger than conventional Chamberlinian theory might have led one to suppose).

This observation leads Nichol to criticize Chamberlin's view that, under conditions of monopolistic competition, price is always too high. In order to provide evidence that Chamberlin is not necessarily correct, Nichol provides the following diagram.⁽²⁾



(1) Ibid., p. 126.

(2) Ibid., p. 127.

Assuming that the market is characterized by an "unlimited number of competing products"⁽¹⁾, and that the demand and cost conditions are the same for all, competition will

"...force their price down to the level of cost (including normal profits) at the most efficient scale of production."⁽²⁾

Equilibrium price in the above diagram, for example, would be ra , and the corresponding output would be oa . If we now assume that the element of differentiation may be introduced, leaving other aspects of the situation constant, it is possible that each individual product will manage to establish an equally large market for itself while the one-tenth of all the buyers will continue to be "marginal" in their attitudes. If the discontinuous Demand curve for the product of each individual producer lies below pp' (the curve of Average Costs) under these circumstances, it would be unwise for any one to charge a price different from ra . If, for example, a higher price were selected by the single seller, he would lose those marginal customers whose attachment is so important in helping him maintain a scale of production large enough to ensure that unit costs are below or equal to price. If a lower price were selected, the "increased cost of increased production entails a loss."⁽³⁾

From these observations, Nichol concludes that

"...in this case of unlimited competition among differentiated products there is no new equilibrium price level above that of perfect competition. On the contrary, the price tends towards the same level ordinarily shown by competitive demand and cost curves. In this process marginal buyers, though greatly out-numbered, exert a decisive influence."⁽⁴⁾

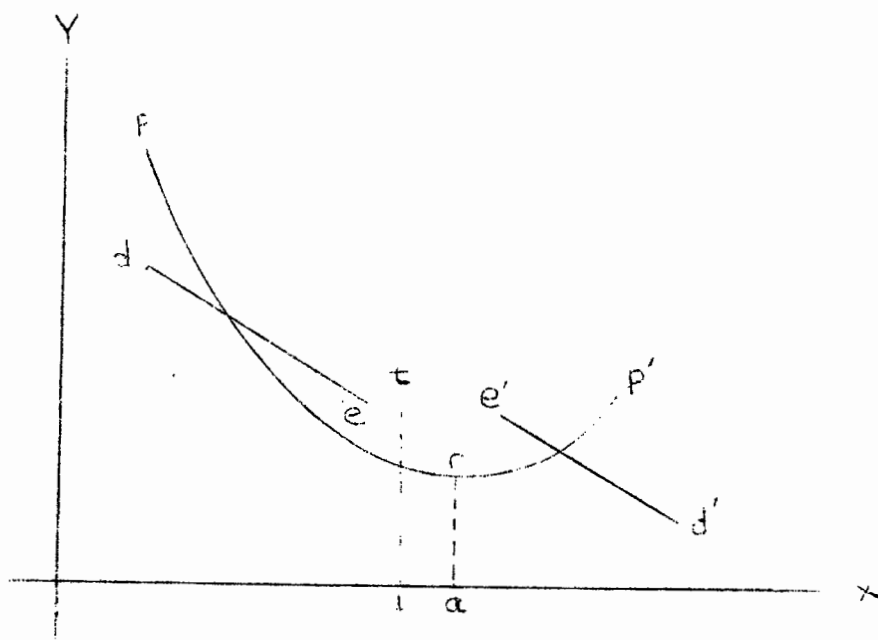
Nichol preposes a further case under conditions of which "differentiated" products are held to be selling at the same price ra , and, as a result, the upper branch of the Demand curve may be assumed to lie above the curve of Average Costs.

(1) Ibid., p. 127.

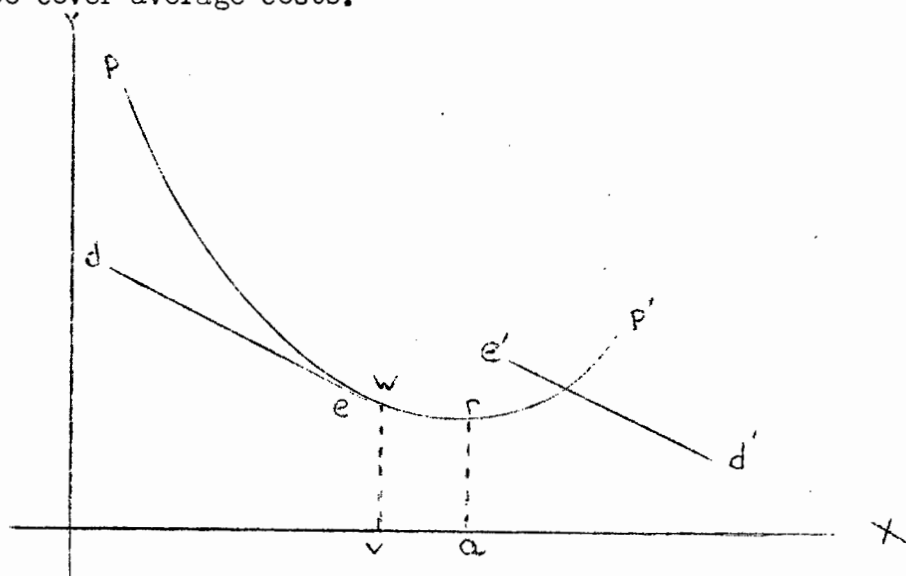
(2) Ibid., p. 127.

(3) Ibid., p. 128.

(4) Ibid., p. 128



If we further assume that not all sellers are aware of this, and that, in fact, the information is available only to a particular producer, by raising his price to t_1 , he will succeed in making temporary super-normal profits, and will be able to ignore marginal buyers while in that position. It will obviously pay him to raise his price to this level, since at t_1 , he need concentrate only on old established customers. Should his competitors also raise their prices so that all are equal, the seller in question will find it even easier to retain his established clientele and will once again be able to sell to marginal buyers. It is however possible that, where all are selling to the marginal buyers, competition will ultimately force prices down again (i.e. competition either within the group of "old" sellers, or new competition from without the group). This will cause a shift in the Demand curve to the left, with the general price level moving to w . At this stage no seller can rely solely on the trade of his old established customers and must attempt to attract marginal customers in order to cover average costs.



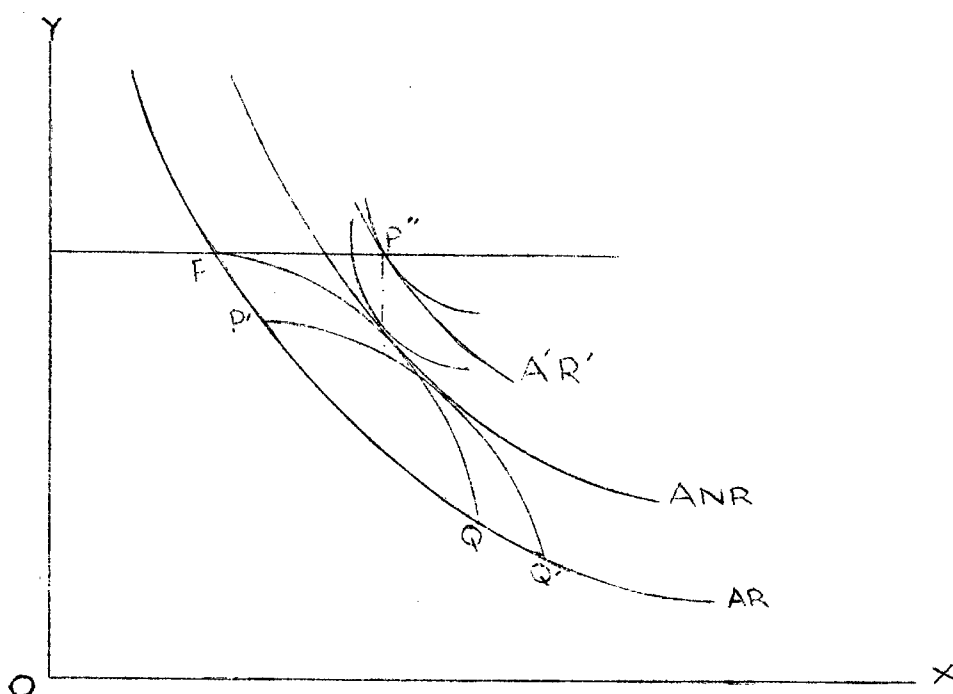
If competitors were so numerous as to force de for each individual producer to lie further to the left, so that at gb the sales of each producer to all classes of customer just equated average cost to price, no super-normal profits could be made and the group itself could be in equilibrium. The realization however is possible on the part of each rival that, by quoting prices lower than vw, he would be able to increase his profits through attracting those marginal buyers at present purchasing elsewhere. This will result in an elimination of those competitors unable to sustain their sales at OV at least and equilibrium will be achieved when

"...the number of producers left is just sufficient to meet the total demand at this price."(1)

The significance of Nichol's observations and their relevance to the question of advertising were issues raised by Henry Smith, in an article entitled 'Discontinuous Demand Curves and Monopolistic Competition: A Special Case.'(2) Smith bases his argument on the view that

"...prolonged advertisement of a product at one price has the effect of rendering the product unsalable in any comparable quantity at any other price, higher or lower."(3)

In support of this, he produces the following diagram(4)



(1) Ibid., p. 133.

(2) Quarterly Journal of Economics, May 1935. Another article by Smith in the Review of Economic Studies, 1934/1935, p. 62, deals with the question of Advertising Costs and Equilibrium and employs similar graphical representation. See also 'The Imputation of Advertising Costs', Economic Journal, December 1935, an attempt at empirical investigation.

(3) Smith, Quarterly Journal of Economics, May 1935, p. 542.

(4) Ibid., p. 544.

in which AR represents the Demand curve for the product in the absence of advertising, P the price at which sales may be increased by selling outlays (subject to decreasing returns) and PQ the Net Revenue curve resulting from advertising expenditure at price P. (P'Q' may be taken to be representative of other curves which may be drawn at different prices). Smith adds:

"From any point on PQ a perpendicular to a line parallel to OX through P measures the cost per unit of selling the quantity indicated, while the distance along the line between P and the point of intersection measures the quantity sold in excess of 'normal' demand."(1)

The curve ANR is the Average Net Revenue curve which indicates the maximum revenue which can be obtained by the firm through the combination of optimum expenditure on advertising with each of all possible prices. The curve does not indicate the price prevailing for any output, but reflects the firm's total revenue, which may be used to derive the former by drawing a horizontal parallel to the base line OX through the origin of PQ on AR. The point on the horizontal immediately above that on which PQ is a tangent to NAR will indicate the price at which the relevant quantity will be sold when expenditure upon advertising is at an optimum. Smith points out that the diagram reflects the notion that the "productivity of advertisement is the same at all prices"(2), since PQ and P'Q' occupy a position which suggests that at prices P and P' the return to selling expenditures will be the same. It is far more likely that the productivity of selling expenditure will be greater where prices are relatively lower and, for this reason, A'R' will tend to be more elastic than AR. Further, the PQ curves may be drawn to indicate the fact that they constitute a

"...range of mutually exclusive possibilities of increasing sales at one price."(3)

If the seller adopts a price under such circumstances he must be aware of the fact that advertising at such a price will render itself less productive at any other. At the same time, one of the PQ curves will have to be selected (since they represent the possibilities of increasing sales and are "mutually exclusive") and the result will be that the "others will become flattened."(4)

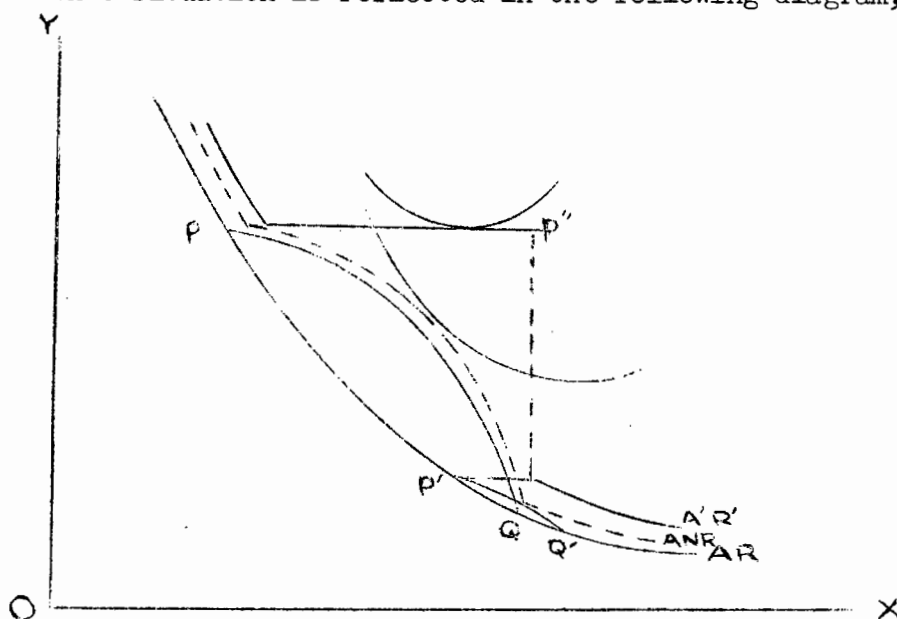
(1) Ibid., p. 543.

(2) Ibid., p. 545.

(3) Ibid., p. 545.

(4) Ibid., p. 546.

This situation is reflected in the following diagram,



in which PQ represents the Net Revenue curve relevant to the adopted price. The other curves have become flattened and there now exists a discontinuity in the Demand curve and, over a certain distance, a condition of perfect elasticity. The Demand curve is perfectly elastic over the same distance as the curve of Average Net Revenue follows the contour of PQ.

Using the above analysis, it is possible to draw certain conclusions regarding the question, introduced earlier, of the unsalability of a good at all but one price. Smith suggests that the clue to the argument lies in the fact that people generally do not wish to be bothered with the making of calculations or estimates.⁽¹⁾ He points out, therefore, that

"...if...one of a continuous series of money prices is differentiated from its immediate neighbours by circumstances which make it difficult for any other price to be substituted for this one without 'calculating things or making close comparisons' then one may expect the result of any upward price change to be a greater diminution of demand than would be the case if only a greater money expenditure and not an increased expenditure of both 'trouble' and money was involved. Similarly, one may expect the increase in demand resulting from a fall in price to be very slight in circumstances in which a diminished money price was accompanied, and perhaps even outweighed, by an increased 'trouble' price."⁽²⁾

(1) Ibid., p. 548.

(2) Ibid., p. 548.

This sort of situation is most likely to arise where customers have become used to paying a particular price for a product for a long period of time. A change in price might induce these customers to review their expenditures and perhaps change their buying patterns to the disadvantage of the product in question. It is also likely to arise, for example, where goods are identified on the basis of price (utility) rather than "name or trademark"⁽¹⁾, and where, under such circumstances, the market is characterized by a large number of

"...fairly similar commodities sold under different brand names and extensively advertised."⁽²⁾

On the latter basis, Smith concludes that the Demand curve for any commodity distinguished from others by brand advertisement will resemble the curve A'R' in the second diagram - provided that the prices of all other goods do not change. Where price is accepted as a "specification of the commodity"⁽³⁾, the producer, if he wishes to sell, must advertise.

Smith suggests that where a seller, after maintaining a particular price for a considerable period of time, decides either to raise it or lower it relative to the level on which his rivals are keeping theirs constant, it is likely that the change will induce the consumer to question the quality of the article and perhaps to refrain from purchasing it in favour of those articles the prices of which are more familiar to him.

"Thus, against the background of intensive publicity, a fair number of consumers will feel that they are 'playing for safety' if they transfer their custom to a competitive brand of which, ex hypothesi, the price has not been changed."⁽⁴⁾

In this context, George J. Stigler has made the observation that it is virtually impossible for a consumer to be aware of all the changes in either products or prices which are being advertised.⁽⁵⁾

(1) Ibid., p. 549.

(2) Ibid., p. 549.

(3) Ibid., p. 549.

(4) Ibid., p. 550.

(5) 'The Economics of Information', Journal of Political Economy, June 1961.

"The cost of keeping currently informed about all articles which an individual purchases would be prohibitive.

A typical household probably buys several hundred different items a month, and, if, on average, their prices change (in some outlets) only once a month, the number of advertisements (by at least several sellers) which must be read is forbiddingly large."(1)

For the retail or wholesale seller, a similar problem exists, in that, were he to advertise the changes in prices of his possibly large variety of products every time such a change became necessary, his expenses would be unjustifiably great. As far as the manufacturer is concerned, lack of knowledge concerning the price or nature of his product is a disadvantage.

"The cost of search is a cost of purchase, and consumption will therefore be smaller, the greater the dispersion of prices and the greater the optimum amount of search."(2)

T.H. Silcock in his article 'Advertising Costs in Monopolistic Competition' (3) writes:

"From the point of view of the seller, it makes little difference whether sales are attracted by advertising or by a cut in price. The buyer may accept one article rather than another because the price difference overcomes his objective preference or the cost of transport, or alternatively because his subjective preference is removed and he is convinced that the walk to another seller's premises is good for his health."(4)

This point of view will be examined at a later stage in the analysis since it is of relevance to the question of location in retailing.

(1) Ibid., p. 223.

(2) Ibid., p. 223.

(3) in Dundee Economic Essays, ed. J.K. Eastham, Dundee, 1955.

(4) Ibid., p. 103.

CHAPTER IV

The preceding chapters have been concerned mainly with an outline of the nature of the theories of "Monopolistic" and "Imperfect" competition. A detailed understanding of the procedure of analysis is essential in providing a base from which other theories may be developed and, as this study proceeds, reference will be made to those aspects of the orthodox analysis which have been discussed earlier. It has not been possible to provide a background to the main section of this work - a discussion and a development of retailing theory - without including a certain amount of detail which is of no direct relevance to what follows. At the same time, it has also been necessary to examine the writings of theorists other than Professors Chamberlin and Robinson, in order to place the works of the latter in proper perspective. For this reason reference has been made in the preceding pages to a wide number of books and articles published over the past 30 odd years. At this point, therefore, brief consideration will be given to an aspect of the theory which was developed as a result of a series of investigations into the behaviour of businessmen in their capacity as price setters and policy makers in a world of competition.

The findings of the study were published in an article by R.L. Hall and C.J. Hitch, entitled 'Price Theory and Business Behaviour'⁽¹⁾. The purpose of the paper was to

"...examine, in the light of interviews, the way in which businessmen decide what price to charge for their products and what output to produce."⁽²⁾

It has already been shown that orthodox Monopolistic Competition theory had come to view the process of price fixing and output determination as a matter of expanding production to the point where marginal cost and marginal revenue were equated. Where average cost and average revenue could be equated, the doctrine suggested that a group of competing monopolists were in equilibrium and any deviation from this equality would be interpreted as a movement away from such equilibrium. The value of the theory of Monopolistic Competition did not, according to the study, extend to its analysis of either oligopoly or monopolistic competition with oligopoly since the Demand and Marginal Revenue curves are indeterminate where there is strong interdependence between the

(1) Oxford Economic Papers, May 1939.

(2) *Ibid.*, p. 12.

price and output policies of different firms.⁽¹⁾ In spite of this, it would appear as if there is frequently a tendency to examine such situations in terms of orthodox analysis and the results are thereby rendered invalid.

The researches of the Oxford group produced the conclusion that

"...the most striking feature of the answer was the number of firms which apparently do not aim, in their pricing policy, at what appeared to us to be the maximization of profits by the equation of marginal revenue and marginal cost."⁽²⁾

Instead, a questionnaire sent to 38 businessmen revealed to the investigators that prices were set on the basis of the full-cost principle, by which is meant a system under the conditions of which

"...prime (or 'direct') cost per unit is taken as the base, a percentage addition is made to cover overheads (or 'oncost', or 'indirect' cost), and a further conventional addition (frequently 10 per cent.) is made for profit."⁽³⁾

The reasons submitted for this behaviour were various but included the belief that price would be maintained at the full cost level in order not to evoke competitive reaction from close competitors, the notion that such was a "fair" or "just" price, and the fact that many sellers are prepared to accept less than the maximum profits because they believe that the "quiet life" is preferable to the hectic chasing after profits. Whatever the reasons for the acceptance of this point of view, analysis of the replies revealed that the following conclusions might be drawn: (a) Firms frequently do not establish their prices in the manner which orthodox theory would suppose, in that they do not attempt to equate marginal revenue with marginal cost; (b) Oligopolistic interdependence amongst firms is common in markets for manufacturers and competitors will therefore generally take the effects of their policies on those of their actual or potential rivals into consideration; (c) Under many conditions where oligopoly is either absent or present businessmen will attempt to price their goods on the "full cost" principle; (d) Prices fixed in this manner will tend to be stable and will only be changed in response to fairly significant changes in costs but not in response to minor changes in demand; (e) Prices are frequently not explicable on purely

(1) Ibid., see p. 17.

(2) Ibid., p. 18.

(3) Ibid., p. 19.

economic grounds, and may be a function of the historical development of a particular industry or of the subjective attitudes of the individual entrepreneurs towards their markets and competitors.

A similar result was achieved in a study undertaken by I.F. Pearce and L.R. Amey ⁽¹⁾, although the principle of "cost plus" pricing seems to have been replaced by the notion of charging "what the market will bear" ⁽²⁾. In this context a single firm was examined and the attitudes of three senior executives were assessed, particularly in so far as price and output fixing techniques were concerned.

The inadequacy of the orthodox analysis of Chamberlin and Robinson in describing the phenomenon of competition amongst a small number of large firms, the price and output policies of which are interdependent rather than independent, has been clearly shown by K.W. Rothschild, in an article entitled 'Price Theory and Oligopoly' ⁽³⁾. Adherence to the view that price theory must yield determinate solutions if it is to have any analytical value, has, according to Rothschild, meant a relative neglect of duopoly and oligopoly problems in the writings of Chamberlin and Robinson. Where, on the other hand, the duopoly problem had been given some attention by the earlier Monopolistic Competition theorists, most of it was directed towards a determinate solution and the result was a

"...removing from the analysis (of) its most essential differentiating aspect: the oligopolists' consciousness of their interdependence." ⁽⁴⁾

Where such interdependence was recognized however, the notion that oligopolists would accept the fact of their capacity to influence rivals without actively doing anything about it predominated and the value of the analysis was severely limited.

Recognition of the interdependence of firms in certain market situations also meant that new variables - other than those developed specifically for the analysis of monopolistically competitive firms - would have to be introduced. In this regard, Rothschild has pointed out that

"Economists have on the whole shied away from this problem of drawing up a wider and different framework which could deal with the oligopolistic cases, because the concepts and methods used for the other market situations would be of little use." ⁽⁵⁾

(1) 'Price Policy with a Branded Product', Review of Economic Studies, 1956-1957, p. 49.

(2) Ibid., p. 60.

(3) Economic Journal, September 1947.

(4) Ibid., p. 303.

(5) Ibid., p. 305.

The present section provides no discussion of literature directed specifically at the theory of Monopolistic Competition in retailing. The decision to omit such works is based on the view that there are few sources suited to the line of discussion being adopted in this thesis, and that the discussion in the previous section is sufficient. It is the intention in this thesis that the ideas presented in the following chapters be examined in the light of the literature on the subject of Monopolistic Competition in its role as a theory of the firm, as envisaged by the earliest writers on the subject.

CHAPTER V

DEMAND

When we enter the realm of retailing theory it becomes clear that the concept of a Demand curve as being primarily a reflection of the demand (at any possible price) for a single "product" must give way before the more sophisticated notion of a Demand "curve" for an interacting group of commodities and services. The demand for each commodity or service, then, is dependent upon the demand for, and price of, the others. The single commodity approach to the theory of the firm is not without its value within the confines of the orthodox analysis but fails to provide a clear picture of issues specific to retailing.

Retail outlets do not generally sell only one commodity. Where one type of commodity constitutes the main source of revenue for the shop there remains scope for stocking a wide range of varieties some of which will sell better than others. Examined from this point of view it becomes obvious that the expressed desire for a particular product - even if that "product" is merely a representation of the agglomerate demand for individual "commodities" and "services" - gives no idea as to the proportions of the different items making up the sale. The question of joint demand, where the demand for one commodity depends on the decision to buy another - as in the case where commodities are generally bought in combination - becomes extremely relevant. For example, a reduced price on commodity "A" might induce consumers to buy more of its complement, "B", with the result that the Demand curve applicable to "B" would reflect greater sales at a given price. The Demand curves for "A" and "B" are interdependent. Although Marshall gave great attention to the problems associated with joint demand and with "composite" demand for the same commodity derived from a variety of uses, and although these concepts formed the cornerstone of neo-classical price theory, the more simplified versions of single commodity Demand curves, which were generally current in orthodox analysis, neglected these subtleties. In abstracting from reality to explain, in a simplified way, the processes by which a demand schedule is built up, these complicating considerations tended to be neglected. Yet any description of reality which neglects them loses much of its explanatory force.

When the doctrine of Monopolistic Competition was adumbrated, it also made no explicit recognition of the question of joint, or otherwise interdependent demand for the commodities sold by a single seller. The expositions of Professors Chamberlin, Robinson

and most others were not concerned with this aspect of the problem. The aspect of demand which was stressed, in order to give a richer picture of reality, was rather the existence not of complete substitutes but only of close substitutes amongst products.

Under the conditions of "monopolistic" and "imperfect" competition defined by earlier theorists, the "product" which was produced by any single firm could not be regarded as analytically separable from the firm itself. Consequently, an increase or decrease in the demand for the "commodity" sold by a firm meant that the firm itself would experience a corresponding gain in, or loss of, customers. This postulate would only be valid if each seller sold only a single physical commodity.

Where the retail firm is concerned the matter is more complicated. As there may, and generally does, exist a wide variety of goods and services for sale under the roof of the single shop, a new relationship between the seller and the goods he sells must be postulated. If the unit of analysis is to remain the firm (qua sum of all the goods and services it sells) it is legitimate to view the firm and the product as analytically inseparable. Under such conditions the "reality content" of the theory is largely lost. It is only where the seller and the individual goods and services which he sells are regarded as possessing different, and hence separate, "Demand curves" that the experience of the real world is approximated.

The following schedule will provide a clear picture. If we assume a situation in which two multi-product outlets are selling the same combination of four commodities at prices requiring the same total amount of consumers' expenditure in both cases, the position may be reflected thus:

<u>Commodities</u>	<u>Outlet A prices (cents)</u>	<u>Outlet B prices (cents)</u>
A	10	5
B	5	5
C	5	5
D	5	10
	<hr/>	<hr/>
	25c Total	25c Total
	Expenditure	Expenditure

From the schedule it becomes obvious that, although the total expenditure demanded of consumers at both outlets remains the same, commodities "A" and "D" are priced differently. Since in each case one of the shops is selling the commodity more cheaply, if we assume a ceteris paribus situation, the elasticity of demand for

the higher priced commodity will, once again in each case, be greater than it is for the same, but lower priced, one, e.g. the elasticity of demand for commodity "A" in outlet "A" will be greater than it is for commodity "A" in outlet "B". On the other hand, since each shop is selling a higher priced commodity, a balance of elasticities is achieved, and the demand for the combination of commodities (and, therefore, ceteris paribus, for the goods and services of each seller) possesses the same elasticity in the case of each shop. Whilst therefore, individual prices induce consumers to change shops, the equality of the total expenditure required is sufficient encouragement to "stay put". A composite demand schedule for all the goods stocked by the firm need not vary in the same degree as the demand schedules for the various items. (This does not imply that there is necessarily any valuable affiliation of customers with suppliers in the Chamberlinian sense. Where there is no suitable alternative combination or commodity within the shop itself, customers are quite likely to search elsewhere.) The conclusion is that the elasticity of demand for the relevant commodities is not the same as the elasticity of demand for the total output (goods and services) of the shops selling them. A decrease in the demand for certain goods as a result of a change in their prices need have no effect on the total outlay on the commodities sold in the shop if there is compensating expenditure on other items.

Orthodox Monopolistic Competition analysis is not equipped to deal with such a situation, since it postulates a "single commodity" or "product" - neither of which classifications is suited to explaining even the simple phenomenon of "loss-leaders". One result of such an inadequacy is the fact that it is not possible to say exactly what the effect of individual commodity price changes is on the overall Demand "curve" for the entire shop. The problem is compounded if it is observed that a change in the price of one part of a combination or standard "basketfull" of commodities may result in a change in the composition of the entire combination. This would effectively preclude an analysis of the effect of price changes on the position of a single seller vis-a-vis his competitors and the concept of "interdependence" within the "group" loses some of its value. Price changes would mean that the "products" sold by the same seller over time could never be compared with one another. This has severe implications for individual and group AR and AC curves.

In a section of his analysis discussed earlier, Chamberlin introduced his representation of the Demand curve for an individual

firm. In the particular instance the Demand curve was represented as lying below that representing the Demand curve for the industry as a whole. The object was to indicate that the individual firm may increase its profits by moving down the curve dd' and so that all sellers will do so in an effort to avail themselves of the prospects for gain. The elasticity of the curve dd' is, according to Chamberlin, an indication of buyers' preferences amongst sellers.

An extension of this principle produces the downward sloping (finite elasticity) curves of Monopolistic Competition theory. A higher or lower price maintained by one seller in relation to his competitors will, according to orthodox analysis, enable him to retain some of his customers or increase them (whichever the case may be) and so permit him a greater degree of latitude in pricing than would be the case under conditions of "perfect competition". This assumption is valid only within the strict limits of early theory.

If we admit the significance of commodity combinations in retailing, modifications are required. Since it has been suggested that where a change in the price of a "basketfull" of commodities takes place the combination of purchases may change as well, it becomes immediately apparent that a change in the price, and therefore, the combination of commodities (the "product") being sold by the individual seller, prevents any valuable diagrammatic representation of the interaction of the seller with the industry. The Demand curves, since they represent a different "product" at every price, become meaningless.

The break with the orthodox analysis which the above discussion implies is significant. It has been suggested here that, for purposes of exposition, seller and "commodities" should be clearly separable analytically. In deciding to reduce prices, the retailer will have the alternative of lowering them on all the goods he has to offer or only on a small number of individual goods or combinations. If he reduces the prices of all his goods, the retailer must be making the assumption that the elasticity of demand for most (if not all) individual goods throughout the entire range is sufficiently great for the increased sales at the lower price to offset - or more than offset - the decrease in revenue from each unit sold. An analysis which is incapable of explaining how a firm may gain total custom through reducing the price of only a few commodities (a relatively small proportion of the total) is inadequate to the realities of the retail trading situation. Chamberlin's Demand curve, which relates to the whole range, provides no guide to its detailed composition. In order to make a satisfactory study of the retail trade it is necessary to be aware

of the need for disaggregating the firm's demand schedule into a composite one comprising numerous commodities, with varying elasticities of demand, and not forming an invariable combination.

At this point we proceed to a discussion of the validity of the orthodox view that Demand curves under conditions of monopolistic competition in retailing display the same characteristics as the finite elasticity curves envisaged by theorists studying manufacturing. Even if we accept the view that the retail firm and its wares are analytically inseparable and assume, on that basis, that, *ceteris paribus*, the greater the aggregate expenditure called for from consumers, the fewer customers will remain and, vice versa, we may legitimately contest the view that the finite Demand curve is an adequate representation of the relationship of demand to "price" in retailing.

Whilst the customers who normally purchase from ordinary retail outlets may not have the same expert skills and information as professional "buyers", there can be no doubt that a large percentage of shoppers exercise careful judgement most of the time before making purchases, especially of goods which are in general use and are regularly purchased. Both these conditions are important, first because they are necessary to the establishment of adequate knowledge and second, in so far as any customer who finds that the goods he has to purchase form a significant part of his total expenditure - such as the food and other household goods which must be purchased almost daily - will establish the cheapest and most convenient source of supply before committing himself to "regular patronage". Such a view implies consumer rationality. At the same time, goods such as clothes, books, etc., which are bought less frequently are sometimes bought "impulsively" and with less informed judgement, so that the role of careful price comparisons seems to have less significance. Even here, however, an element of rationality may be quite strong and the typical consumer might, after planning a specific purchase, "shop around" in an effort to locate the most suitable source of supply even of merely occasionally purchased goods, in terms of price and qualities. In the case of large occasional items of expenditure, expected to provide satisfactions over a considerable period, the exercise of rational choice might be very prominent.

In any discussion of the processes by which consumers reach their purchasing decisions, the nature of the retailing complex with which they are faced must be detailed. In a rural village, for example, where the population is not sufficiently large to support more than one of any kind of shop, the pattern of shopping will be very different from that found in large urban areas. In the

first case, the structure of retailing will be such as to dissuade the consumer from "shopping around" in order to obtain the benefit of lower prices unless he is prepared to travel to the nearest town in order to do so. In such a case, his decision to travel further afield will depend among others upon such variables as the comparative prices prevailing in the town and village respectively, the cost and inconvenience of the journey, and the enjoyment to be derived from the expedition and process of selection as such.⁽¹⁾

In the second case, the consumer will enjoy the advantages of large numbers of shops of the same type (either large or small⁽²⁾), all of which are competing with one another in a limited geographical area for the custom of the buyer. For many reasons one would expect the urban store to be able profitably to offer goods at lower prices than might prevail in the rural village, and competition to be sufficiently strong to compel it to do so.

Whatever the circumstances surrounding the sale of the product i.e. whether the retail outlet be in strong competition or in a virtual "monopoly" position in the market, the attachment of a customer to the firm after the fashion indicated by Chamberlin in his conclusions regarding the finite characteristic of the demand must be explained in terms of the distinctions drawn - either rationally or irrationally - by buyers amongst sellers.

If one assumes that the customer has not the choice amongst a number of competing sellers (as would be the case in a rural village), the value of Monopolistic Competition analysis is largely lost unless one is to consider the peripheral cases where the alternative of shopping in town exists. Broadly speaking, generalization in such circumstances is not really possible since the obstacles to mobility of persons and goods between the village and the nearest town may be such as to grant a strong monopoly to any single firm. However, mention has already been made of the articles by Hotelling, Chamberlin, Lerner and Singer⁽³⁾ and others dealing with the issues of location, transport costs and the differentiation of product, and the basis for such differentiation has been the cost of transport or "convenience".

(1) These questions will be discussed later.

(2) In the context of this paper, the "size" of retail outlets will be "small" or "large", depending upon their average costs. For a "large" shop, the cost per unit of goods and services handled will be lower than for a "small" shop. Diagrammatically presented, the AC curve of the former will lie lower than that of the latter. The simplification is purely for purposes of exposition.

(3) See above, Chapters I, II.

An interesting feature of these analyses therefore, is the notion that the consumers are in fact rational in their choices amongst sellers.

"It is therefore assumed that prices at point of consumption must be identical in equilibrium conditions. In the type-models consumers are, however, rigidly located along a road and are therefore variously separated from producers. Attention may therefore be concentrated on delivery costs."(1)

Assuming then, that the justification for price differentials between different geographical locations may be found in transport costs, and not in the comparative irrationality of the consumer, one must also assume - as the theorists above have done - that in the ordinary course of events it is more costly for buyers (of whom there are comparatively many) to move amongst sellers (of whom there are comparatively few) rather than the other way round. This assumption may indeed carry weight in the marginal cases to which we have already alluded i.e. where the village is situated far from the town. Under such circumstances it is highly probable that, for the purposes of purchasing articles of regular consumption which have to be bought at frequent (perhaps even daily) intervals, the village consumer will find it to his advantage to pay the higher price prevailing in the village rather than have to travel to town at an expense to himself, in time and inconvenience, as well as in money, equal to, or greater than the value of the price differential on the goods purchased. In the case where the savings in the cost of the purchases and the losses on travel balanced each other, there would be no advantage either way, ceteris paribus.

Such situations are however no longer predominant characteristics of the market. Generally speaking, particularly in the vast urban complexes in which large proportions of the populations of most Western economies live today, the consumer is mobile. The belief that he is situated somewhere along a line, moving only in response to changes in the prices and transport costs of competing commodities tends to confuse the issue. In the ordinary course of events, the buyer moves into and out of the large shopping areas which have come to characterize the cities and suburbs of today. Within the close confines of urban and suburban shopping centres,

(1) Andrews, P: On Competition in Economic Theory, London, 1964.

delivery costs and other costs associated with the movement between residential and such shopping areas have lost much of their significance. Theory which does not, therefore, recognize a movement of buyers not closely linked with particular transport costs is inadequate as a general explanation of retailing phenomena.

If we take the point further, an interesting observation may be made. Assuming, for example, that the finite elasticity Demand curves of the Chamberlin type derive their shape largely from such location factors as have just been described, and that the contention that consumers are indeed mobile in the manner suggested is a valid one, it becomes obvious that the orthodox notion loses some of its value.

Examining Chamberlin's thesis first, one considers that it is possible for a single seller to distinguish himself to some buyers purely on the basis of his distance from his nearest rival. This could, in terms of the orthodox postulate, be the case where the retailer is situated in a suburb, with the nearest competitor being located in the adjoining suburb or in the Central Business District itself. However, this view would seem to assume that each shopping journey is an undertaking discrete in itself and the prices which the suburban store could charge could exceed those of more distant competitors by the full cost of the journeys its customers would have to undertake in order to supply themselves elsewhere. But, in the "ordinary business of life", many of its customers might, in any case, have to travel to regions where the other suppliers are dominant. Under such circumstances, the consumer might well be indifferent as between sources of supply in any regions in which he happens to find himself for reasons other than shopping. In an urban area, for example, it might be contended that the location of retail outlets in different zones tends to generate consumer "loyalty" and therefore, relatively inelastic Demand curves for the goods and services of the individual seller. This point of view is naturally invalidated if in fact consumers can just as conveniently conduct their shopping at other shops which they pass in the course of the day's work - some indeed presenting less of a detour than a visit to the neighbourhood shop and presenting no greater difficulties in fetching their purchases home. This does assume, of course, that they find an equally satisfactory assortment of goods in the shops they encounter in their travels; if they do not, the element of differentiation does not depend merely upon location.

This weakens the argument that mere distance can provide of itself an effective means whereby individual sellers can expect

to distinguish themselves from their rivals. Indeed the clustering of shops of a similar nature in close proximity to one another which is a feature especially of central business districts, suggests that it is of limited significance, except where widely-separated markets are concerned. This casts doubt upon the validity, as a generalization, of deriving Demand curves of finite elasticity as a simple function of transport and delivery cost differentials.

Such doubts could be important. If buyers' preferences amongst sellers were on average rationally determined by differences of transport costs, then much post-Marshallian discussion would seem to have been unnecessary. For Marshall's competitive market was not one where uniform prices prevailed throughout. On the contrary,

"...of course if the market is large, allowance must be made for the expense of delivering the goods to different purchasers; each of whom must be supposed to pay in addition to the market price a special charge on account of delivery."(1)

The principle which simply derives discrepant prices from this form of restricted competition, implies, of course, that individual sellers would be able to raise or lower their prices in such a way as to lose some (but not all) or gain some (but not all) of the available customers, since the accretion or depletion of customers would depend upon how near they were situated to the source of supply, and therefore, to what extent their transport or delivery costs would be affected by changes in the supply price. It is as well to make these points clear before embarking on our subsequent discussion of the elasticity of demand for the goods and services of an individual retailer in close competition with others in a limited geographical area.

While we have shown that some caution should be exercised in accepting transport costs as a reason for assuming the finite elasticity constructions of the Chamberlinian analysis, there seem to be other and still more cogent reasons for believing that the strength of consumer preferences amongst retailers (the major consideration from which the shape of the firm's Demand curve is derived) is commonly overstated.

Turning first to the question of consumer rationality, W.A. Lewis has pointed out that:

(1) Principles V, 1, 3, 8th edition, p. 325)

"There has been some attempt to explain retailing, using as a large element in the analysis the irrationality, ignorance and inertia of customers. While it is impossible to deny that these factors have some importance, it is impossible to agree to any significant importance in view of the rapid changes constantly taking place in the structure of retailing...Any shopkeeper who uses the irrationality, ignorance or inertia of his customers as major elements in his policy would soon find himself in Carey Street."(1)

In the large metropolitan shopping centres which have already been mentioned, the average consumer will quite likely be aware of the broad range of prices which exists for a given commodity, particularly if that commodity is bought with any regularity. Similarly, where the customer is in the habit of buying any relatively constant combination of commodities, such as foodstuffs, he will probably be aware of the range of prices ruling for such combinations in different shops, and will, as a result, have set a conscious or unconscious upper limit to the amount that he is prepared to pay. In this regard, W.A. Lewis has suggested that:

"It would be too much to claim that elasticity of demand is infinite for each shop, especially in the naive sense that a small shaving of price immediately expands sales; but it is not too much to say that, in trades where the customer shops around, shops with cheap prices will sooner or later bankrupt those which try to sell similar qualities with similar service at a higher price level in the same centre."(2)

P.W.S. Andrews⁽³⁾ concludes that a mere 10 percent of all the customers in a given large shopping area need be rational in their choices - in that they carefully weigh up prices and qualities before committing themselves to purchases - in order to render the Demand curve for the goods of any individual shop highly elastic. This conclusion is based on the hypothesis that, in the average large shopping sector, 10 percent of the consuming population will constitute a large proportion of any seller's market. If therefore, it can be argued that any seller faced with a fair number of customers who are sensitive to price will have to ensure that his prices do not move out of line with those of his competitors, he has to stick to the market price,

(1) 'Competition in Retailing', Economica, November 1945, p. 209.

(2) Ibid., p. 210.

(3) Andrews, Ibid., p. 102.

and about that price he encounters an elastic demand for the commodities he sells.

For different customers there exist sharp distinctions amongst the types of shop yielding greatest satisfaction in shopping. Many customers, for example, are prepared to sacrifice the "service" element in a shopping expedition in return for a price which does not include the cost of supplying such a "service". On the other hand, certain customers are sufficiently desirous of some sort of treatment which makes them feel different from others, that they do not mind paying any extra. Before proceeding to an analysis of this question however, a short digression on the nature of "services" is in order. This is necessary since there exist upper and lower limits to the amount of "service" for which any customer can rationally be expected to pay.

In the present discussion, the word "services" will be used to denote any circumstances surrounding the sale of the product at point of purchase which make the product more attractive to the purchaser. Such factors as air conditioning, personalized selling attention, deliveries, pleasant decor, etc., will serve as examples. But there are other types of service which are not consciously provided by the seller and which exist purely as a function of the size of the retail outlet. Where large departmental stores are able to provide the facilities we have just enumerated, the small shopkeeper who relies for his trade on a much smaller section of the consuming population is not in a position to afford them, or at least, not really to the same extent. On the other hand, to a customer in search of pleasant atmosphere, the small "corner shop" is sometimes able to provide satisfaction. In many parts of Britain, for example, the small shop has traditionally been a meeting place for people of the village and it is conceivable that many a customer would not change the relatively impersonal atmosphere of a city departmental store for the personal exchanges which he has regularly with the shopkeeper who knows him well and from whom he may even receive good credit facilities. The same applies to the small urban shop, but here the ties are likely to be somewhat weaker in view of the larger size of the consuming population and the alternative sources of supply.

However, at this point, without going into elaborate detail, it is necessary to establish the nature of the various "services" which may be provided. Another type of service which is particularly significant is that provided by specialists. The difference between a small bookstore and a book and stationery counter in a large, busy departmental store may lie largely in the fact

that more specialized knowledge and a better chosen stock is provided in the bookstore. Therefore, to customers desiring something to read and unlikely to be satisfied with anything picked up whilst making other purchases, the specialist bookstore will probably provide a more satisfactory service. For casual reading matter, as part of combined purchases along with other items, the satisfaction might well be reversed, and the greater convenience in time and energy of "one stop" shopping might outweigh the specialist services of the bookshop.

Whatever the nature of the service, if it is worth having (in the case of the bookstore, the information and selection available to customers of the specialist shop), the cost of providing it will generally be included in the price of the goods which the service helps to sell. This does not necessarily mean that the price of such goods is higher in the shop which provides the specialist service than it is elsewhere. The provision of well-considered specialist services may cut down other elements of cost as well as provide greater conveniences. However, normally, the departmental store with a selection of above-average price goods requires higher-cost facilities to attract the above-average income customer who is prepared to pay for them. Similarly, the small corner shop with the personal service and slow turnover of goods must allocate a greater proportion of fixed expenses per unit of stock sold than must the large supermarket or "discount store" in which service is kept to a minimum, but prices are much lower.

Since retail trading depends to a large extent on the nature of services offered, a body of theory which does not take explicit recognition of the cost of, and demand for, such services, does not provide the wherewithal for the analysis of retailing at the stage which it has currently reached. It does not provide the tools for a study of the competition between large and small shops.

When we turn briefly to the importance of services in attracting customers, it is evident that, where a specialist store is faced with competition from a departmental store stocking a commodity which is broadly the same as that upon which the specialist depends for his livelihood, the smaller seller will generally have to put himself to greater effort than his rival in order to attract custom. The large shop will always have greater numbers of customers, by virtue of the wide range of goods which it sells. The advantage in such circumstances is that any customer attracted to the shop by items other than the one in question may in fact find himself purchasing the item on impulse. This impulse may

be prompted by any number of processes. The effect is such that the departmental store is able to sell goods peripheral to those on the customer's shopping list and for which the customer would not have searched under other circumstances. In the case of the specialist store, on the other hand, a customer would have to be attracted specifically by the single specialized range of items which the shopkeeper offers, and the capacity of the seller to attract his buyer is dependent upon the appeal which his stock has to the general purchaser. It is, of course, true that the "draw", as far as the specialist store is concerned, lies in the shopping centre itself, and there exist certain external economies. It is, however, equally true that there is a greater convenience to be derived from purchasing a "basketfull" of goods under one roof than from purchasing parts of the basketfull in different parts of the shopping centre. This does not apply, of course, to the purchase of only a single item. The failure of orthodox analysis to conceptualize in terms of "combinations" is particularly evident here. The small bookseller will usually not find it easy to attract custom specifically to his shop when the literary tastes of the average metropolitan reader may generally be satisfied by the range available at the departmental store.

One might say, therefore, that the satisfaction derived by the consumer in making a purchase (over and above other general purchases) in a specialist store as opposed to a departmental store, must be sufficiently great to warrant the expenditure of time and effort which moving out of the confines of the departmental store involved. This is a question of convenience far more relevant to retailing than to manufacturing. The consumer who is able to obtain the bulk of his requirements under one roof may forego certain purchases which would require him to "shop around". Alternatively, he may buy a product slightly less satisfactory than something he might have obtained elsewhere in a specialist shop, for example - but which is readily accessible where his other purchases are being made. The nature of the competition prevailing between specialist shops and general shops has been noted by Andrews:

"Their (specialist shops') prices must be attractive enough to bring buyers to them for their commodities specifically and they must always expect to share the trade in their goods with general shops stocking narrower lines of them, where buyers are not affected by any desire to be able to make more extensive comparisons or to have no expectations of price gains from them."(1)

(1) Andrews, Ibid., p. 104.

Accepting the view that there does exist an element of competition between small and large shops selling similar commodities, we may turn our attention to the question of stocks. As has already been suggested, the carrying of stocks by sellers is a retailing service. To the purchaser in search of specific items, a seller with specialist stocks is in a better position than the store which carries a wide but less specialized selection. In order to cater for such requirements therefore, the small specialist generally has to carry a more expensive assortment of stocks and experiences a slower rate of turnover than the general stockist - who caters only for "everyday purchasers". This is simply because the general dealer will only deal in the more popular and therefore more frequently purchased items.

Since the demand for a particular good in a particular type of shop will be a function of the stocks which the seller carries, the shape of the Demand curve will reflect some characteristics specific to the seller. Where, say, the seller does not hold stocks of any significant magnitude and deals only in the more popular lines, the elasticity of demand for his "product" is likely to be greater than that of the seller catering for the more selective buyer. This is likely because general lines tend to be stocked by a greater number of stockists in any given area than specialist lines, and a rise in the price of an item (if it is of some importance in the purchases of consumers) which can be obtained in almost any shop will elicit a demand reaction of some consequence - greater, at least, than that which would follow from a change in the price of a good for which there tends to be fewer and more "discriminating" purchasers. This is simply another way of putting the proposition that, the more numerous the sellers of a particular article, the more competitive will be its price. The significance in this case, however, is that it indicates something of the importance of stock maintenance in the generation of demand, and, more particularly, of the nature of the Demand curve facing specialist and general stockists.

Delaying the discussion of the relationship between the cost of stocks and the demand for the good for the time being, we have concentrated our attention solely on the relationship between the maintenance of stocks and the generation of demand. We have established that the greater the specialization of goods, the less elastic is likely to be the demand for the stocks of the seller. We may legitimately postulate that, in specialist shops, prices

will tend to be higher than elsewhere for similar items.⁽¹⁾

At the same time, turnover will tend to be lower. These issues have significant implications for the Cost curves of the seller as well, and later analysis will attempt to indicate that there exists an important functional relationship between the Cost and Demand curves of the individual shop. Examination of the earlier chapters on the development of orthodox analysis will reveal that this relationship was not recognized.

If we admit the fact of competition amongst, firstly, retail outlets of the same size, i.e. exhibiting the Chamberlinian "uniformity" of Cost and Revenue curves and selling similar combinations, and secondly, outlets of different sizes but selling commodities, the broad ranges of which tend to overlap, we create problems which orthodox analysis is not equipped to cope with.

We turn first to the nature of competition amongst retailers of the same size. At this stage it will only be necessary to add to certain of our observations concerning the nature of the Demand curve facing the seller. Where the sellers in question are of the large, general commodity variety, operating in fairly close proximity to one another, customers purchasing standard items at regular intervals are likely to be very sensitive to price changes. Differences in service offered are not to be ignored, but since retailers in this instance are selling similar products on a similar scale, the type of service offered will probably not vary widely from shop to shop. As a result, the total outlay required to purchase either single or combined commodities may be assumed to remain fairly constant throughout the shopping area.

Now, the relative consistency of this outlay over the particular area of competitive selling will probably prevail irrespective of the number of sellers, provided there be at least two. On the assumption that the individual competitors are sufficiently large to be able to influence the market by changing their price/output policies they are likely to behave in a manner similar to those in the Chamberlin "small group" case, or those discussed in the Hall and Hitch survey. An example might be found in the field of

(1) H. Smith, Retail Distribution, London, 1949: "...on the whole, the better stocked the shop relative to the amount of custom available, the higher the average prices it can command..."(p. 18) This would seem to contradict his statement: "...The article may be one which can only be bought satisfactorily after the inspection of a wide range of shapes and sizes. But in this case it does not follow that the wider the range offered, the higher the price she (the customer) will be willing to pay."(p. 17)

"supermarketing". In this sector of retailing, sellers are rarely distinguished on the basis of service since there is generally little of that. The differences lie mainly in prices and customers are quick to spot variance. For this reason, individual competitors will attempt to ensure that generally, prices do not move "out of line" with those of other sellers. Minor variations in the prices of individual products are not precluded in such a case, but it is likely that the outlay required for the purchase of combinations of such products will not differ from one place to another.

Returning to our proposition that where there are a number of large sellers, i.e. "large" in relation to the market, competing for the custom of a given market, price will tend to conformity, the need for greater precision becomes evident. For one, it is necessary to discuss the relevance of the Demand curve from a different point of view. For another, it is important to consider the nature of "price differences" and the requisites for attracting custom.

For practical purposes it is not unjustifiable to view the Demand curve for the firm in the theory of Monopolistic Competition as merely reflecting a range of possible prices and outputs, most of which will, in fact, never be relevant. That is to say, in the majority of circumstances, a firm will settle upon one price and output and the range of possible price/output alternatives which exist will not be of great interest. It is not valid to postulate that there is any finite relationship between price and output along the entire length of the curve, since, as we have already noted, changes in price induce changes in certain variables other than output. It is obviously an oversimplification to suggest that there is any way of ascertaining sales at any "price" (i.e. the outlay asked of consumers for given purchases) other than that at which the firm finds itself trading at any point in time. The point which emerges from this line of reasoning is that the demand for the output of the individual firm will tend to be very elastic in the region of the "price" being asked by the majority of sellers. Even in the single product duopoly analysis of early theory, or in an imperfect oligopoly situation, each seller will suspect that the market for his product is extremely sensitive to price and will assume great demand elasticity at the "price" in question. By raising his "price" therefore, the seller operating under conditions of oligopoly such as those just described will experience a loss of customers, and vice versa for a fall in his "price".

Thus far the analysis has been conducted largely in terms of "price differences" as a device for attracting rational customers from one seller to another. At this point it is necessary to the general body of propositions being developed to associate this principle with certain other issues. It has been established that, in the large multiple-product retail outlet, customer convenience plays a large part in inducing buyers to make all their purchases under "one roof". In order to attract customers to the shop in the first place however the retailer may have to provide an item, or items, on more favourable terms than his competitors. The actual technique differs from place to place but could best be applied through the use of "loss leaders". These are generally well-known branded products sold at lower than standard prices in order to attract customers. They are frequently sold at a loss in the hope that increased sales on other items will compensate. Demonstrations and samples are also useful attractions. The initial impact of such a device will be to make the demand for the goods and services of the retailer in question more inelastic, since it will establish preferences in the minds of buyers. Such programmes however, are not the prerogatives of individual sellers. Since the nature of the metropolitan retail market is such that a loss of customers will make itself felt fairly quickly, other retailers will also attempt to attract customers along similar lines. The result will be competition in the provision of loss leaders, demonstrations etc., and ultimately, the elasticity of demand for the goods and services of the initiating seller may increase to its former magnitude.⁽¹⁾

Superficially, the competition would appear to be based on price differences or minor distinctions in service. This is not strictly true. The reason for the re-establishment of the conditions of greater elasticity of demand for the goods and services of individual sellers lies in the principle of cross-elasticity of demand. In this case the cross elasticity is the measure of the degree of substitutability of the goods and services of one seller for those of another. The extent of such substitutability will be far greater in the urban complex than in the country town. This situation is obviously contingent upon the large size of the population to be served and the inadequacy of small numbers of sellers to do it effectively.

(1) I am indebted for this point to Mr Z.S.A. Gurzynski of the Department of Economics at the University of Cape Town.

Accepting the view that the area of substitutability may, in fact, be significant, and that the capacity of sellers of similar size and type to use competitive devices against one another is just about the same, one may suggest that the market of any one seller will not be enlarged permanently by the use of such devices. This is simply because different sellers, using such devices at different times, will have the opportunity of gaining customers, but will lose them to their rivals, as the latter, in turn, innovate. It is possible that in the early stages of the "consumer attraction" campaign, certain new customers will be induced to come into the shop and their general purchases might well increase sales temporarily. But the reactions of rivals, particularly those "very close" to the seller in question, will be prompt and the status quo will quickly be re-established. Whilst therefore, the initial "spurt" of devices designed to attract new customers to a particular shop may serve to make the overall demand for its goods and services less elastic, the capacity of other shops to do the same will quickly cause the demand to become more elastic. The cycle is continuous and provides an incentive to the ambitious to stay on top.

This line of argument would seem to raise once again the questions concerning the interdependence of Demand and Cost curves. On this point the Chamberlinian approach is valid.⁽¹⁾ In a case mentioned earlier it was suggested that the necessity for holding stocks is greater for some retailers than for others, even though the broad category of goods sold may be similar for both groups. It was suggested that such stocks could be influential in creating demand and the functional relationship between Cost and Demand curves was postulated. It has been shown that Chamberlin recognizes the capacity of Advertising expenditure to influence the slope and position of the Demand curve for a product, but since the cost of buying stocks is indistinguishable, to the retailer, from the cost of buying goods for immediate resale, it is not valid to regard the cost of holding stocks as a "selling" or "advertising" cost. This reservation does not apply to such "advertising" campaigns as the demonstrations and samples mentioned earlier.

An issue which merits attention at this point is "branding". Branding is a term used to denote the identification of a particular good with a particular source to the extent that the purchaser will be aware of the impossibility of buying exactly the same good

(1) Chapter III, above.

elsewhere, i.e. from another source. Trademarks, copyrights, patents, etc. have been discussed earlier in this context.

Much of the Chamberlinian analysis relies upon the principle of branding, but it can be shown that the impact of the policy is dissipated when it is examined in a retailing context. There are two reasons for this. Firstly, the manufacturer will generally tend to sell his products in a large number of stores even if (as is the case with patent medicines sold in pharmacies) they are generally of the same retail type. Secondly, where people are in close proximity to both the product and the large number of substitutes which could possibly be available, they are less likely to insist upon a particular type and will frequently be inclined to regard most of the varieties on display as being substitutable. This situation will be most common in supermarkets or large general stores. It is certainly different from the circumstances envisaged by the orthodox theorists who fail to consider the possibility that more than one branded product could be sold by any one seller, or rather, that the demand for any one product could affect the demand for another.

The first observation suggests that where the same branded good is sold by a large number of sellers, and is therefore distributed fairly evenly throughout the market, the existence of customers "loyal" to the product should not affect the distribution of buyers amongst sellers. Barring restrictions, it should simply be a matter of the retailer ensuring that he too stocks the product and no seller will be placed at a disadvantage to any other. This view is based on the assumption that there is no discrimination on the part of the manufacturer on the basis of location, size, quantity etc.

If the distribution is, in fact, even throughout the market, the Demand curve facing any single seller will not be less elastic than those facing his competitors. If distribution is not even, the store stocking the product in question will attract custom "loyal" to the good and, on that basis, a condition for attaching buyers will prevail. The result may be a tendency for buyers to prefer the products of one retailer over those of others. This case is however, less likely and it may be assumed that for stores of the same general type (and, therefore, for stores most likely to be in close competition) the range of branded goods sold will generally tend to be the same. Under such circumstances Chamberlin's analysis is far better applied to the competition amongst the manufacturers of the branded goods. The effects of the competition amongst their products will be felt less acutely at the retail stage.

Turning to the second observation, it becomes necessary to consider the impact of substitutes. It has been suggested that where the range of substitutes available is significantly large - as would likely be the case in supermarkets - the importance of branding as a device to distinguish among the products of individual sellers tends to diminish. Whilst it is true that manufacturers' advertising can create preferences in the minds of consumers, the buyer confronted with a wide range of products is also able to "see for himself", as it were, the similarities which exist amongst products. Even if it is not immediately possible to establish all the relevant characteristics of the various goods, it may be possible for the buyer to realise that the distinctions drawn amongst products are often largely manufacturer-sponsored on no really significant basis whatsoever. This situation is naturally less likely to come about where only one variety of the good is displayed and where customers have no opportunity to compare or respond to mutually cancelling competitive on-the-spot advertising.

Whatever the validity of this notion, it is not a necessary condition for weakening the force of branding in retailing. This is simply because, if the suggestion that all shops of the same type have access to the product in question is valid, it is of no importance whether customers display preferences for individual varieties within the range sold by the retailer. It is not likely that the Demand curve facing the individual seller will be very materially altered by a distribution of preferences in such a manner.

The issue which now arises is that concerning goods branded and advertised by the manufacturer. If the manufacturer is able to generate a demand amongst final consumers through advertising, it is possible that trade buyers will be tempted to pay higher prices than otherwise simply to be in a position to supply the good on demand. Retailers might well fear that by not being able to provide the good they will lose customers who might have been attracted to the shop and therefore to the entire range of goods being offered. It is conceivable that the Demand curve facing manufacturers under such circumstances would retain the shape envisaged by orthodox theory.

The possibility that such a situation might arise depends upon the range of substitutes available and the type of retail outlet concerned. It has already been established that the retailer provides a service to his customers. It has also been established that since retailers of similar size and type are in strong competition with one another, the nature of services offered

and prices will tend to be similar. Even if, for some reason, the nature of services changes somewhat from shop to shop, the value which they have for the consumer will probably be similar in each case.

As a result, the inability of a particular seller to provide a specific good sought by the customer will be a disadvantage depending on the range of substitutes stocked which may conceivably fulfill the functions expected by the customer from the good he originally wished to buy. The substitutes available are an important issue in that, if properly displayed, they may be used to divert the customer's attention from the original product and he might be induced to remain in the shop.

The question of service however, is most relevant. If, as is often the case, the customer has been induced to purchase a particular commodity because of some specific quality such as "after sales service" or "dependability" which the manufacturer has informed him he will obtain on purchase he will tend to prefer the product in question to other brands. The large retail outlet is probably in a position to provide guarantees and after sales service of a type which may compensate the consumer for the lack of access to the product he originally wanted. Similarly, where the shop is selling a product which can in no way be improved by any tangible service - a tin of beans, for example - it is in a position to inform the consumer of the qualities of the substitute good and its similarity to the product being sought but not available. This technique of "on the spot" advertising can be used to compensate somewhat for the advertising by the manufacturer of the commodity not available and it will certainly tend to render the Demand curve for the latter far more elastic than it might have been. Taken as an aggregate, it is also highly probable that some stores will stock particular branded goods which others do not, and the possibility of substitution amongst all stores (of the same type) of branded goods in general will tend to be good. As a result, the distribution of custom will probably be such as to prevent "clusters" of consumers about specific retailers.

Examined from this point of view the existence of branding processes is not likely to affect the overall demand for the goods and services of any one retailer. As a result, retailers are not generally likely to adhere blindly to individual manufacturers' ~~ers~~ of branded products. The view that, for branded goods, the Demand curve is likely to be relatively inelastic should be modified for the seller to "great elasticity", while the Demand curve facing the manufacturer, though perhaps more inelastic, is likely to be

much less so than has been generally assumed.

The nature of the association between manufacturer and retailer may vary. It is possible that the retailer may stock only the branded or rebranded products of the manufacturer without being in any way affiliated with him. Alternatively, the retailer may actually own his own source of supply, or vice versa in the case of the manufacturer. The implications for the Demand and Cost curves of both manufacturer and retailer will be slightly different according to circumstance.

We turn first to the case where the retailer is merely the sole stockist of the manufacturer's goods. If the goods are for resale under original brand names and are sold in conjunction with the standard lines obtainable at all retailers, the individual shop will possess an advantage in the attraction of customers. However, the suggestion that competitors lacking a specific branded product are generally able to dissipate the impact of their rivals' "monopoly" advantage through the use of alternative brands and "on the spot" persuasion still holds true in this case, and the cross elasticity of demand for the goods and services of stores will be sufficiently high to ensure a general elasticity of demand for any one shop at prevailing prices. Where the manufacturers' goods are resold under the retailers' own brand names, the assumption may legitimately be made that the same "physical" product is likely to appear in a fairly large number of shops selling similar ranges of commodities (assuming that retailer and manufacturer are not directly affiliated) albeit under a different name in each case. Since the assumption is that shops are sufficiently similar for the cross elasticity of demand to be high, price and quality conscious buyers will be likely to respond quickly to price differences. There seems no reason to believe that one "brand" would be preferred to others on any basis other than price. It is therefore probable that branding of the type described in the preceding two cases will not stimulate the relatively inelastic demand conditions of the general type postulated by Chamberlin, at least not in the region of the prevailing market price.

The second case postulated, i.e. where the retailer controls his own source of supply or vice versa, concerns issues of cost which have not yet been treated and which would best be left until the discussion of demand has been completed.

It is not intended at this point to question the assumptions concerning the causal relationships among factors on which traditional Demand curve analysis is based, but, with specific reference to the orthodox view of the Demand curve facing the retailer, the

justification for assuming that price changes exert no effect on the position of the Demand curve must be analysed further.

Orthodox Monopolistic Competition theory assumes that changes in price merely cause changes in the quantity demanded, without admitting the possibility that, over time, price changes may in fact play a significant part in determining the position of the Demand curve, or better, the quantities which may be sold at particular prices.

One may return briefly to the arguments presented at the beginning of this chapter, concerning the nature of the "product" in retail theory. It will be remembered that the "product" is regarded really as a combination of different commodities and it was assumed that a change in price of a single commodity could affect the proportion in which all the commodities would be combined. In the arguments developed subsequently it was pointed out that an individual retailer, in possession of a wide variety of goods can attract custom to his shop by reducing the price of a single item. The result would be an increase in average revenue. The advantage of attracting increased customers to the shop through the use of such a technique is that the demand for the retailer's **other** goods can be stimulated. The "demand curve" shifts to the right. Monopolistic Competition analysis is not equipped to deal with concepts of this nature, even though it makes use of the valid assumption (purely within the limits of its analytical framework) that a fall in price increases the quantity sold.

A number of assumptions have been made in the preceding pages. Firstly, it has been assumed that each seller is in a position to increase his sales by differentiating his final product slightly. As a result, all sellers will follow suit and the result will be differentiation of a vast range of types. The result is the highly elastic situation postulated, since consumers find it difficult to differentiate and the task becomes impractical. Secondly, it has been suggested that in certain cases the products sold by individual sellers are sufficiently alike in most respects to encourage the consumer to differentiate amongst them purely on the basis of price. The highly elastic Demand curve will result in both situations.

It has been the intention to examine major portions of the Chamberlinian analysis based on the view that Demand curves tend to be of finite elasticity. In undertaking such a task, difficulties have arisen. Firstly, one might say that the only meaningful approach to a criticism of the generality of orthodox theory must be a discussion of exceptions. In doing this, the critic

runs the risk of criticism himself, since theorizing on exceptions may tend to produce its own generalizations.

Secondly, and more specifically, the generalization of greatest consequence for what is to follow is the notion that the Demand curve facing retailers under the normal circumstances of close competition (in the Chamberlinian sense) tends to be extremely elastic. In order to justify such a conclusion, a number of assumptions have been required. The test of the validity of such assumptions lies essentially in a comparison of the "realism" contained in them with that embodied in the orthodox analysis. It is simply a matter of examining the premises of existing theories in order to ascertain which approximate most closely to the experiences of the real world. The final test of acceptability of the analysis is an application to cases so that empirical observations may be made.

The assumptions made in this part of the paper must be compared with those discussed in Part One. It will become evident that the concepts developed by the original Monopolistic Competition theorists have had to be modified in order to render them acceptable within a very broad frame of reference, i.e. within the range suggested by Chamberlin's notions of "interdependence" amongst firms. Such modification, on the basis of different assumptions (geared to retailing) has, however, changed peripheral issues beyond recognition. The slope of the Demand curve of a "seller" is no longer the same. The Demand curve is no longer particularly inelastic, but rather the opposite; yet the notion of "interdependence" remains, or possibly, because it remains.

Whichever the analytical method employed, one issue makes itself evident. Chamberlin and the orthodox theorists have postulated a Demand curve of finite elasticity without qualifying exactly how finite it is intended to be. In the present discussion a Demand curve of near infinite elasticity has been postulated. Perhaps it is useful to regard this as an "over-reaction" to the approach originally adopted.

CHAPTER VI

COST

An analysis of retail activity raises, as we have tried to show, doubts concerning the validity of the orthodox view of the Demand curves facing individual sellers. It also raises doubts concerning aspects of orthodox Cost curves.

The approach to the theory of the firm adopted by the early monopolistic competition theorists embraces the concept of U-shaped Cost curves and a marginalist equilibrium methodology based on the equation of marginal cost and marginal revenue. Briefly, the notion that Cost curves (specifically long run Average Cost curves) possess an overall U-shape is derived from the principle of economies of scale. An increase in production, up to a point, yields successively lower average costs and subsequently, successively **higher** average costs. The inference which, within the limits of the theory, may legitimately be drawn, is that there exists an "optimum" point of lowest cost of production per unit.

However, the shape of the Demand curve under the conditions of monopolistic competition envisaged by the earlier theorists is such as to preclude the possibility of the producer ever being able to increase his output up to the point where his costs are at such a minimum⁽¹⁾ - particularly where there exists unrestricted entry into an industry. The point of tangency between the Average Revenue and Average Cost curve is located to the left of, and therefore at a point higher than, the position of lowest average cost. Owing to assumptions - in the "large group" model - concerning the capacity of individual sellers to sell at prices lower than, and therefore at quantities greater than, their competitors, it is possible for such sellers to improve their position vis a vis the "optimum" point on the Average Cost curve. No seller will be able to achieve the optimum. In contradistinction, the Demand curve facing the seller under conditions of perfect competition is held to be perfectly horizontal, with the result that tangency between the Average Revenue and Average Cost curves is achieved at the lowest point on the latter. The result is that the firm is able to utilize its capacity to the full. The closer the position of tangency to the lowest point on the

(1) See above.

Average Cost curve, the better the utilization of capacity and the less "wastage".

The second major methodological issue which merits attention is that of the equation of marginal costs and marginal revenues. Whilst the use of this procedure is by no means limited to the description of price policy under conditions of monopolistic competition, it is in this area where acceptance of the principle without question results in severe analytical shortcomings for retail theory. Essentially, the MC/MR method of establishing the quantity to be produced and the price at which it is to be sold has its roots in the view that where MC is greater than MR it will not be of any benefit to the producer to continue production, and, where MR exceeds MC, continued production will be justified since each extra unit of output adds more to total revenue than it does to cost.

Reference has already been made to the views put forward by the Hall and Hitch research group. The contention was that, under normal circumstances, producers do not, for a number of reasons, operate in terms of an equality of marginal costs and marginal revenues. Rather, they prefer the principle of "cost plus" pricing. Attempts will be made at a later stage to show that the retailer will "optimize" the use of his capacity by selecting a "markup" which will clear his stocks.

We turn first to an examination of the shape and content of the Average Cost curves in retail trade. Marginal Costs will be dealt with later. We have already introduced Chamberlin's view of costs of production as including:

"...all expenses which must be met in order to provide the commodity or service, transport it to the buyer, and put it into his hands ready to satisfy his wants."(1)

If we accept such a view of the costs represented by the average cost, it becomes necessary to qualify the concept of "expenses". Whilst it is true that Chamberlin does not limit his definition of costs of production to the manufacturing firm, the very generality of his view makes it necessary to distinguish between the type of cost incurred in the manufacturing business and that incurred in retailing. It is not necessarily valid to assume that the same processes of cost determination should operate in both areas.

(1) The Theory of Monopolistic Competition, p. 123.

In the case of the manufacturing firm the suggestion that the Average Cost curve is U-shaped implies that additional units of output, after a certain point, can only be achieved at successively greater cost to the producer. The concept can be explained fairly easily if one accepts the view that, as the limit of plant capacity is approached, the cost of variable factors will start to rise. Such variable factors consist generally of physical inputs. With fixed costs remaining, so to speak, fixed, it is only these variable costs which can, in the short period, contribute to an increase in total costs and therefore average costs.

Fixed costs, however, do not remain fixed. An analysis of cost may be divided into two parts, the "short" and "long" run. In the short run it is assumed that certain factors such as machinery, buildings, land etc., cannot be varied in quantity in the process or adjusted to the requirements of increasing output. As a result these factors constitute "fixed costs". In the long run however, the firm is held to be able to change the proportions in which fixed factors are combined and, with increased flexibility, is given the potential to produce an output at a lower average cost than would be possible in the short run. Fixed costs may therefore be regarded as variable with the decision to produce in the long run.

In turning to an examination of the type of costs incurred in retailing it is important to determine precisely the nature of the commodities sold by both the manufacturer and retailer. The manufacturer sells a good which he has produced himself. He has, in effect, assembled all the factors necessary for "creating" the product. In addition, he has supplied the equipment used in the manufacturing process. In a different sense, the retailer must also assemble the parts necessary for the "creation" of his final product. The product may be regarded as being the range of goods which he sells, and the parts may be seen as the individual goods making up the range. The "equipment" employed in the transformation of the parts into the whole may be regarded as the shop itself and any other fixed costs which will be incurred. The view is indeed simple, but is all that will be required at this stage.

Orthodox methodology does not however, provide fully for the circumstances under which retail trade takes place. It does not recognize any functional relationship which might possibly exist between the Demand and Cost curves for a product. Such a relationship may evidence itself in a number of different ways. Firstly - as has already been indicated - it is possible that

demand for a product, and the price which consumers are prepared to pay for it, will be a function of the stocks carried by the seller. This naturally has implications for Cost curves. Secondly, in the same way as the Demand curve for a "product" must be viewed as a representation of the demand for all items and services making up the whole, so the Cost curve must be viewed as the summation of all the individual costs of items being sold. On that basis, it must be treated as it will change its shape with a change in the combinations of the goods demanded and sold. This situation, i.e. frequent combination changes, is more likely in retailing than in manufacturing since the overall "product" basketfull can be kept more or less constant even if the proportions in which its parts are combined are changed.

There is a possibility, where the Average Cost curves are concerned, that individual sellers will display great similarity. But they might well be faced with completely different Average Revenue curves. Or vice versa. This brings into question the limits of intra-seller comparison and with it, the range within which firms may be regarded as being in competition with one another. The conclusion must be that Chamberlin's analysis is only useful in examining competition amongst firms whose Cost and Demand curves are very similar. Such examples are rare.⁽¹⁾

It would appear that orthodox analysis does not provide the framework necessary for the examination of competition between, say, a department in a large store, and a small retailer depending solely on the sale of the product common to both. The Cost curves of both may be similar, but it is possible that the Demand curves reflect different price ranges. Such a situation is common in retailing.

The implication is that orthodox analysis is inadequate in the discussion of new entry competition since it assumes that all competitors sell similar products under similar conditions.

As the discussion proceeds these issues will be made clear.

Once again, questions arise concerning the relationship between Demand and Cost curves. Monopolistic Competition theory postulates that, where one seller asks a higher price than, and sells less than, his competitors, he will be obliged to produce at a point which, represented diagrammatically, lies to the left of that at which he would be optimizing his use of available capacity. The implication is that, by asking a lower price, and thereby selling greater quantities, he will be able to take advantage of

(1) The Theory of Monopolistic Competition, p. 110.

certain economies. By reducing his price and selling even greater quantities however, he will ultimately be unable to meet his costs of production. Much, if not all, of the difficulty lies in the shape of the orthodox Demand curve in orthodox analysis, since the assumption is made that no seller will be able to achieve the production position where his Average Revenue curve lies at a tangent to his Average Cost curve at its lowest point.

The price at which the seller under conditions of monopolistic competition is unable to carry on producing at a profit over the long period is higher than that at which he would experience this difficulty under the conditions of near perfectly elastic demand we have postulated. The benefits of bulk buying will, under any circumstances, be greater to all concerned under conditions of near perfect competition, as we shall attempt to show.

The downward slope of the Average Cost curve of the retailer will not necessarily be similar to that of the manufacturer. The difficulty of exposition which arises at this point lies in the fact that the theory of Monopolistic Competition assumes that the Cost curves of all the firms competing within a given range of "product" are similar.⁽¹⁾ A significant adjustment is called for if the problems of the real world are to be dealt with particularly in so far as retailing is concerned. While capital requirements in manufacturing may be such as to establish conformity amongst the Cost curves of competitors, the same range of retail commodities may be sold on a larger or smaller scale. Even if there are no similarities amongst sellers on a cost basis, competition may doubtless be said to exist.

For such reasons a question arises. The orthodox analysis proceeds well (within the limits of its framework) where the conditions surrounding the demand for, and the supply of, the product are the same for all competitors. Since the fundamental purpose of the framework is to analyse the effect of competition on the sellers of products, it serves no purpose to exclude the bulk of the potentially competitive firms from the picture simply because they fail to display the desired uniformity. The point is that such firms, whether they are exactly alike or not, must be regarded as being in competition with one another. Assuming the predominant situation away does not make the analysis any more valuable.

(1) Triffin, in his Monopolistic Competition and General Equilibrium Theory, was the first to dispute this, but failed to draw conclusions regarding pricing policy.

In actuality, Chamberlin postulates⁽¹⁾ the possibility of variation in Cost and Demand curves for variations in product, but this serves little purpose since he continues to conceive of competitiveness in terms of a uniformity of such curves. What this amounts to is the view that it is necessary to develop a technique whereby the interaction of competing firms of different sizes can be analysed. From the point of view of costs then, it is necessary to establish the "long run" curves of the individual sellers and to distinguish between them on the basis of size.

Examined purely from the practical standpoint, certain issues arise. For the large departmental store or supermarket, there exist, as we have seen, certain economies in the buying process. Depending upon the overall size of the shop and also upon the size of the department concerned, it may reasonably be expected that the turnover (measured purely on the basis of quantity) of a particular commodity is greater in the large outlet than in the small one. There are a number of reasons for this. The large department store attracts, by virtue of its structure, more customers than does the small shop, with the result that more consumers are brought "into contact" with the commodity in question. As a consequence of larger sales the large retailer is in a position to buy greater quantities at any one time (if we assume, for practical purposes, that the small seller is not a member of a "chain") and the principle of the economy of bulk purchasing becomes pertinent. Such economy manifests itself in a number of different ways of which quantity discounts are by far the most significant.

Another consideration is the fact that where the single department under consideration carries only a small part of the total commodity range stocked by the store, the significance of the costs incurred in running it is different from that experienced in the case of the small seller. It is possible for instance, that the department is only maintained as a convenience or even a "draw" for customers whilst, for the small seller, the product concerned could be the sole source of income. The fact then, that the cost of running the department can be "carried" by the profits to be derived from the sale of the firm's other items, is not to be disregarded. It means that the departmental store can keep up the commodity "line" long after the small entrepreneur has been forced out of business by higher costs. It means that the large store can operate at a much narrower profit margin than can the

(1) The Theory of Monopolistic Competition, p. 110.

smaller one. This consideration is reinforced if the possibility of quantity discounts is admitted and the general result is a position in which the departmental store (or large retail outlet) can afford to operate under worse conditions than can the small retailer.

There is no doubt that certain consumers do indicate preferences for the service to be obtained in the smaller and more personal shop. But this does not invalidate the suggestion that the shops concerned are indeed in competition, and in certain cases, specifically "supermarketing", large outlets are tending to capture trade from smaller outlets at an increasing rate.

As a corollary to this, the question of new entry competition should be mentioned. Chamberlin's discussion of the relationship between average cost and average revenue - the "tangency" solution - has already been examined. Briefly, it indicates the position of group "equilibrium" at which point sellers will not be inclined either to enter or leave the industry. Chamberlin does explain⁽¹⁾ that the tangency solution must be considered appropriate only to each subgroup of the industry in turn, but such an explanation has little value for the theory if one admits that intra-subgroup comparisons are important. It becomes obvious that, whilst the notion of tangency is valid in a very restricted sense, it is possible that the large firm operating at a lower cost (an aspect not yet fully discussed) per unit of the commodities common to all sellers and therefore in a position to ask a lower price (or possibly forced to ask a lower price owing to the pressure of a highly elastic demand) will achieve "tangency" at a lower point than its higher cost small competitor. If this is indeed so, the use of the tangency solution is limited to exposition. It does not serve as an indicator of the competitive relations amongst the sellers of the product and is not really necessary. To the potential entrant - whatever his size - intra-subgroup competition is an important issue and information concerning only his own immediate class of rival provides an unsuitable reflection of the type of competition he is likely to experience. Chamberlin's analysis⁽²⁾ postulates circumstances in which the Average Revenue curves lie at varying distances from, or at different positions of tangency on, the Average Cost curves as a result of particular

(1) Ibid., p. 111.

(2) Ibid., p. 111.

irreducible monopoly elements possessed by individual sellers. The possibility that Cost curves might, however, lie at different levels, is not discussed.

The use of the orthodox Cost curves is misleading. The criticism applies to the use of Average Cost curves as well as it does to Marginal Cost and Marginal Revenue curves. The early Monopolistic Competition analysis, running in terms of an equation of marginal cost and marginal revenue in an attempt to "maximize" profits, has come, as we have seen, under criticism from the protagonists of the "cost plus" method of pricing. The value of the latter technique will become evident if it can be shown that the orthodox view of the comparability of individual firms' Cost curves is invalid.

Mention has already been made of the impact of individual commodity prices on the demand for others, and consequently on the demand for the "product" of the firm itself. The same consideration applies to the Cost curve. Where commodity combinations are changed in response to a change in demand resulting from a change in prices, there may be said to be a fairly strong relationship between demand and cost. As the quantity sold increases, the average cost of production will decrease up to a point. This principle is in accordance with the U-shaped curve of conventional theory. But since theory is not explicit on the question of intra-subgroup competition it is not equipped to deal with the issue of new-entry competition resulting from favourable costs rather than favourable demand.

Principally, the position is as follows. If the assumption is made that all competitors, potential or actual, are faced with the same Demand and Cost curves, the tangency solution will provide a useful indicator of the state of the industry. If one assumes that new entrants to the industry are faced with the same cost prospect as are the competitors already in it one may suggest that producers already producing will have an advantage over newcomers. The rationale is simple. Examined over a specific time period and in terms of the relation between total cost and output, the new firm will, theoretically, find itself producing at what might be represented diagrammatically as the upper end of the left hand side of the U-shaped Cost curve. Competitors already established will be tending to move towards (or may already have passed) the "optimum" point of production at the lowest point on the curve of Average Costs. They may therefore possess a more favourable relationship between average revenue and average cost than newcomers. It is in this matter that the theory of Monopolistic

Competition lacks clarity. On the one hand, it would appear as if the industry is regarded as being composed only of firms which have existed for the same length of time (and which are therefore operating at about the same points on their respective, and like, Average Cost curves) and, on the other, the implication is as we have suggested, i.e. that new entrants will, by virtue of their smaller output, be at something of a cost disadvantage.

Neither of these views is strictly valid. The notion that new entrants will not be in a position to take advantage of the economies of scale which will probably present themselves as output increases is based on the idea that such firms are starting "from scratch"⁽¹⁾. Such a situation is more likely in manufacturing, since capital equipment does not lend itself so easily to different uses as does floor space in the retail outlet. However, there can be no doubt that even the large scale manufacturer is often able to commence production of a product hitherto manufactured only by other firms at a cost to himself similar to that experienced by such older and better established sellers. A seller (whether he be either manufacturer or retailer) could cover or share his new overheads with his other lines. Whatever the device he employs it is quite possible that the new entrant, if he is a large well-established seller in his own field, might well be able to commence production without immediately having to overcome the disadvantage of higher costs. (this advantage lies in the fact that MC constitutes a small proportion of TC and he has staying power). Even if higher costs do exist for the seller of the product in question, they need not constitute an impediment to selling at a competitive price.

The possibilities of expansion available to a firm (either one specialised in another field and entering the market for a specific product for the first time, or one already operating in a particular field of retailing) depend upon the "divisibility" of capacity. The term is used in the accepted economic sense and applies to the ability of firms to add to their stock of equipment or product lines without having to expand their capacity in large "lumps". A manufacturer, for example, may frequently be unable to expand capacity in order to produce a few more units of output simply because such a policy would require large capital outlay not necessarily justified in terms of the small increase required. The danger of "excess capacity" is increased, if output is unlikely

(1) Andrews, Ibid., p. 78

to be expanded sufficiently to make use of the available capital. The retailer is less likely to be faced with such a problem. Since capital equipment is generally less flexible than retail floor space as far as the range of products which can be "manufactured" is concerned, the manufacturer is faced with another capacity problem. The retailer is in a far better position to alter the range of products he carries because he need generally only make minor alterations to his allocation of floor space. The floor of the retail shop will generally lend itself to the requirements for the sale of most products while physical plant will not.

The retailer would appear to have fewer problems as far as the expansion or modification of his capacity is concerned. Such a situation will not be without its impact upon the ability of retailers to compete. Where, for example, a supermarket or departmental store wishes to add another line to its range of stocks in order to enter into competition with specialist stores, it can generally do so at a moderate cost to itself. It is quite possible that the expansion of the large retail outlet into a particular commodity line would merely require an additional counter (or simply a switch of existing stocks) and a few other accessories required in the sale of the product. No great cost obstacles are likely to exist in anything like the manner which has frequently been postulated for new entrants in the area of manufacturing. In addition, the size of the retail shop and the very nature of its turnover will likely enable it to make bulk purchases and costs of buying stocks will be so low as to compensate for any costs incurred in expanding capacity. Combined with this factor is the likelihood that the demand for the stocks of the seller - once the consumer is actually in the store - tends to become relatively inelastic in view of consumer inertia. This principle works both ways. Customers, attracted by the particular commodity, will increase the seller's sales by purchasing other goods as well, and vice versa. This consideration is, as we have already indicated, quite important. Specialist shops may not wield the same "drawing" powers as general stores, in spite of the external economies to be derived from location in the Central Business District⁽¹⁾. Under such circumstances the large retailer will generally be at an advantage should he decide to enter into a particular competitive field rather than at the disadvantage postulated by orthodox analysis.

(1) The question of such "external economies" is vast and intricate. It is not central to the present line of argument and will not be pursued here.

In turning to a related question, the issue of "bulk buying" is seen to become more complex. It is sometimes the case, as we have seen, that individual manufacturers set up their own retail outlets through which they dispose of all or most of their goods. The reverse is also true but in a less restricted manner. Retailers frequently own some of their own sources of supply. They do not, for obvious reasons, generally own all the sources providing the goods which they sell.

The first case provides some interesting considerations concerning costs, both for the manufacturer and the retailer (if the two are to be considered analytically separate). One might regard the retailer and the manufacturer (each with his own Demand curve) as merely being two parts of the single unit - the seller. Under such circumstances, the relationship between the Demand curve facing the retailer and that facing the manufacturer becomes more understandable than it is in the case where the two sellers are independent of each other. Where the manufacturer is seeking to attract the custom of the retailer he will generally have to ensure that he is able to provide the quantity required at the right price. On the other hand, the retailer will, under normal circumstances, feel no compunction in purchasing from the manufacturer's competitors if he should not obtain satisfactory terms or treatment. The case where the manufacturer is selling directly to consumers through his retail outlets is rather more complex. By virtue of the structure of his sales the manufacturer's retailing side will not have the alternative of buying elsewhere should price not be "right". Under all circumstances, the question of whether the price is right will depend on the Demand curve facing the retailer.

Proceeding further an interesting aspect presents itself. Where the manufacturer and retailer are independent, each will expect to make "normal profits" over the costs of physical production being incurred. These profits are, in effect, rewards for "risk" on the part of the entrepreneur, and are accounted for in Chamberlin's notion of "tangency". Where such manufacturers and retailers are not independent, it is quite possible that the manufacturer will not expect to take his "normal profits" in the transaction between himself and his retail division, but rather, would be content merely to take his share of the profits of the final sale. This situation possesses three interesting aspects. Firstly, the price asked by the manufacturing section may be lower than it would be if the two were independent. Secondly, the costs incurred by the retail section would be accordingly lower. Thirdly, the manufacturer's incentives to compete with other

manufacturers are lessened by the fact that he has assured retail outlets. The result is very similar to that of "bulk buying" by retailers, in so far as the lower cost of purchasing means that sales prices can also be lower than that of smaller competitors. Under normal circumstances this leads to larger turnover. For standard, frequently purchased items however, the cost implications for manufacturers are slightly different than in the case of bulk buying. In such a situation, it may justifiably be assumed that the final demand for the product, or range of products, is fairly stable at the prevailing level of price and will be likely to increase, but only very slightly, as price decreases.

Assuming that the demand for the product is stable, the manufacturer competing with others for the custom of the retailer is less likely to be able to anticipate the retailer's purchases from himself in particular than is the case where retailer and manufacturer are part of the same organization. Individual manufacturers will not be certain exactly what their share of the market will be. If the retail outlet(s) owned by the manufacturer constitute a large proportion of all of supplies of the commodities in question, the "sales" of the integrated manufacturers will be more stable over time and will lend themselves to more accurate budgeting programmes.

The concept of capacity must be mentioned here. Even where bulk discounts are given, the air of uncertainty surrounding the retailer's option to purchase from any of the competing manufacturers means that no manufacturer will be able to plan the extent of his plant capacity with any accuracy. On the other hand, manufacturers selling their goods to the public through their own outlets will be able to estimate the capacity required purely on the basis of final demand and may even be able to achieve operation at, or as close as possible to, the point of minimum average costs.

Proper interdependence of manufacturing and selling divisions obviously means careful estimation of, and allowance for, fluctuations in final demand. If the retailing division is a large supplier relative to the market, a change in demand can have more severe implications for the manufacturing section than might be the case where a number of, perhaps, small manufacturers are supplying the independent retailers. The excess capacity which could result from a decrease in final demand would be more serious in that the effects would not spread themselves over many manufacturers.

Another difficulty which presents itself is the fact that if the manufacturer dependent on the retailer finds that he has an unsalable excess, he is not generally able to find retailers elsewhere who will buy his stock. On the other hand, the manufacturer

who produces for a number of retailers has less difficulty in co-ordinating his supply with the requirements of his customers in that he will generally be able to find someone to take his stocks at the right price.

Where retailers own their own sources of supply, certain cost advantages similar to those just described are available. The retailer is not required to include in the price he pays a "profit" to the manufacturer and is therefore able to obtain goods more cheaply. Under such circumstances however, the difficulties of capacity adjustment present themselves again, and the poor co-ordination of manufacturers' supply and retailers' demand over the long run can result in excesses or shortages of capacity which cannot readily be filled by outside sources.

The argument put forward so far has quite important implications for the theory of the retail firm. It has already been pointed out that the earlier monopolistic competition theorists devoted no attention to the question of inter-subgroup competition. Triffin was the first to point out the analytically superfluous nature of the industry concept by indicating the need for admitting different degrees of competitiveness and substitutability amongst products. He failed however, to incorporate his modified approach into a general body of analysis which could effectively replace the tools developed by his immediate predecessors in the field.

It has been pointed out here that the competition amongst firms of different sizes - and therefore faced with different average revenues and average costs - is an important characteristic of retailing today. At the same time it is conceded that the analysis cannot stop at this point. The nature of, and reasons for, differences in both average revenue and average cost amongst firms has been indicated briefly. It now remains to consider the implications of such a situation.

Whilst it is true that large retailers are often in a better position to receive the goods which they finally sell at a price lower than that usually, but not always, granted to smaller sellers, it is not always likely that the selling prices of each may differ. It is possible, for example, that the small seller may have to cover lower overheads or other selling costs per unit sold and he is therefore in a position to compete, at least on a price basis, with the large seller. He might even possess a "compensating" locational advantage.

This paper has attempted to show that demand under specific

conditions of retailing is sensitive to price to the extent that demand elasticity amongst shops is high. Retailers will be aware of the loss of sales resulting from asking prices higher than their competitors. As a result their pricing policies will reflect the interdependence of demand which prevails for the basket~~full~~ of each seller's product. It has been indicated that the tangency solution proposed by Chamberlin loses its value as soon as it is postulated that the Demand and Average Cost curves of individual retailers are linked but do not necessarily display the uniformity and symmetry he assumes. Instead, the Walrasian interdependence of Triffin's formulation becomes relevant, although the analysis has not been sufficiently extended.

Under the conditions envisaged, it is necessary to devise a framework which will admit the thesis that (a) the costs and "prices" of individual sellers exert an influence on those selling competing substitutes, even though such costs and "prices" are not necessarily the same for all sellers and (b) the tangency solution, as it stands, must be modified if it is to possess any analytical usefulness.

Before such a framework can be developed, a reference should be made to the question of seller attitudes in retailing. In the development of a theory of the manufacturing firm, there is some justification for assuming that under normal circumstances there exist certain obstacles - notably high capital costs - which deter individuals from entering an industry simply in order to "try their hand". The effect of such obstacles is to induce potential entrants to be more careful in deciding whether to go into business or not, since losses might be relatively large. In the case of retailing, on the other hand, potential entrants are faced with fewer obstacles and the prospect of loss does not make itself as evident as it does in manufacturing. The requirements for "setting up shop" are usually limited to the acquisition of a small site and the investment of accumulated savings (not necessarily large in view of the credit sometimes available) in a small range of stocks. The attitude of sellers is often not based on an adequate appraisal of the magnitude of possible losses, but rather on the belief (frequently unsubstantiated) that it is possible to succeed where others have failed. The small corner retailer referred to earlier is particularly subject to such sentiment, and the "mortality rate" in retailing is therefore correspondingly higher than in manufacturing.

The tangency solution offered by Chamberlin suggests that, in the so-called long run, an industry equilibrium will be reached

at the position of tangency between the Average Revenue and Average Cost curves for that industry. The principle involved is simply that concerning the incentives to sellers either to enter or leave the industry. Since the tangency solution proposes that all sellers are earning a normal profit, it will require modification if it becomes evident that (a) under retailing conditions, retailers will generally not enter the industry simply because they are attracted by the profits which others are making, but will rather do so in the hope that they will be able to succeed where their predecessors had failed, and/or (b) that the equilibrium position is frequently not maintained because, at any given moment, there tends to be a surfeit of retailers in the industry, none of whom wish to leave, in the hope that conditions will improve. Even if one could ascertain that individual sellers really do wish to, and succeed in, leaving the industry when their prospects begin to look bleaker, there is no reason to believe that such action results in a return to equilibrium. In fact, the incessant sequence of entry into, and exit from, the industry, and the low level of profits per unit sold (or better, the high incidence of losses) tend to indicate a location of the aggregate AR curve below the AC curve in most circumstances. The implication is that the average profit rate in retailing is negative.

The modification of the concept of tangency which we propose will be necessary here, is difficult to define. If there is any justification for concluding that, overall, retail trade is not characterized by normal profits for a large number of its members and yet that such members are not necessarily influenced in their decisions either to enter or leave by such an observation, it will be necessary to alter the content of the Average Cost curve.

It will obviously be necessary to recast the concept of "normal profit" if such profit is not regarded as being the benchmark for sellers for deciding whether to remain in, or move out of, the industry. Since it is also not the profit which typifies the activities of the average retailer, it must be assumed that tangency, if it is to be achieved at all (in the sense that such an industry is unlikely to be characterized by any equilibrium of sellers) will have to be achieved with the Average Revenue curve on the Average Cost curve which is free of any profit content, i.e. which does not embody any allowance for "normal profit". Under such circumstances, tangency would merely imply that certain of the sellers' costs are covered by his receipts but that he is not actually making any profit. Naturally, such a notion renders the tangency solution useless for the type of analysis which retailing

requires. It does not reflect the profit position which would induce sellers either to enter or to leave the industry. The analysis would therefore require an additional curve of Normal Profits which in all likelihood would have to lie above the Average Cost curve, and which would, in any case, not be covered. This leaves the meaning of tangency, and therefore equilibrium, rather vague. It certainly would seem as it possesses little usefulness as a guide to analysis. It makes little difference whether an AC curve (inclusive of normal profits) or an AC curve and a separate "profits curve" are drawn if the fact that tangency with the AR curve is achieved in neither case means that equilibrium cannot be attained.

If we accept the proposition that the Cost curve of the individual seller possesses the U-shape discussed earlier, the analysis of pricing policy becomes more complex. We assume, for the moment, that individual sellers do not determine the price they are going to ask and the quantity they are to sell with reference to the intersection of the MC and MR curves. Rather, we may postulate that they determine these on the basis of the "cost plus" method of pricing - a device which relies on the selection of a price which bears a fixed relationship to average costs and the imputation of a margin of "fair profit" (ascertained in advance) between average costs and selling price. If this is indeed the case it will be evident that, where AC decreases with increases in output, sellers will either be in a position to increase their profits through keeping their prices constant, or will have to lower their selling prices at intervals in order to maintain constant profit margins.

Another difficulty lies purely on the administrative side. It has already been accepted that most retailers offer a range of commodities. If an attempt is made at AC pricing, certain difficulties become apparent. There is no sense in applying the same profit margin to all goods indiscriminately. The elasticity of demand for individual goods within a combination or range of commodities is not the same. For the higher priced goods - and those not indispensable to the average consumer - the elasticity of demand may be regarded as being fairly high, and vice versa. The causes of such elasticity and the commodities most affected are not central to the argument. All that need be considered here is the fact that elasticities do differ. For such reason, the pricing of commodities on a cost plus basis must be done individually. The difficulty lies naturally in assessing the variable costs incurred in the sale of a particular product. Such details are not easily ascertained.

A difficulty arises from those we have just examined. A seller might experience difficulty in bringing his prices "into line" with those of his competitors. Merely because he has settled upon a price to ask for an item, and his competitors have done the same does not mean anything at all from the point of view of either the actual or the potential competition with which he is faced. The minor differences in the ranges of commodities carried by different competitors may mean that where the one seller is obliged to ask a higher price for an item, his competitors may not be. Such a situation could be the result of any of a number of circumstances, ranging from differences in the size of the retail outlets to the degree of specialization or emphasis on the commodity etc. Such circumstances will most probably exert a disequilibrating influence on, or make the task of establishing, his price difficult. The problem is naturally aggravated in those instances where the seller, or his competitors, are using a single commodity as a "loss leader". In many cases, the commodity is a relatively minor one in the range of the price cutter, but may constitute a large part of the sales of one or more of his rivals. Pricing policy must take account of this.

The difficulty facing the retailer is one of (a) deciding on a basis for price and (b) ensuring that his price policy takes account of the prices being asked for similar commodities by his rivals, not necessarily of the same size as himself. Both the orthodox marginalist and cost plus frameworks are not completely adequate, and the solution is likely to lie inbetween.

CHAPTER VII

TOWARDS A RETAILING HYPOTHESIS (1)

In the development of a theory of retailing, a degree of generality must be maintained within clearly specified limits. In order to achieve this it has been necessary to question the applicability of monopolistic competition methodology as employed by Professors Chamberlin and Robinson. In the earlier analyses, the theoretical framework, although claimed by its progenitors to be of a general nature, did not provide a sufficient guide to the world of retailing. For such reason, the theory which will be developed in this study will provide generalisations within a specific area of commercial activity and will not presuppose any level of applicability outside of the terms of reference.

Returning briefly to the discussion of demand in earlier chapters, it becomes necessary to make a few observations. If it is accepted that the cross-elasticity of demand for the goods and services of individual shops under normal conditions of retailing is higher than in the case of the manufacturers envisaged by Chamberlin, there are significant implications for sellers. If, more specifically, it is accepted that the cross-elasticity of demand is great, not only for the goods and services of similar shops selling similar commodities, but also for shops of different sizes selling similar commodities, the implications for sellers will also be significant.

On the cost side, certain inferences can be drawn. It has been established that the costs facing individual sellers of different sizes are likely to differ. Such costs may be regarded as any expenses incurred in the purchase of stocks from suppliers or in the sale of stocks to consumers, and will therefore include advertising. Advertising qua advertising has not been included in the discussion, since the difficulty of distinguishing, along Chamberlinian lines, between "production" and "selling" costs in retailing is greater than in manufacturing. The principle proposed by Chamberlin, however, holds good and does not materially

(1) The ideas presented in this chapter, whilst originating in my suggestion that the competitive relations amongst retailers must be viewed in the light of their costs, have benefitted greatly from discussions with Mr Z.S.A. Gurzynski.

affect the analysis, since advertising costs of any sort (whether incurred through the use of accepted media such as newspapers etc., or through the use of cut prices or other tangible attractions) will raise costs and influence the Demand curve facing the advertiser.

In so far as the shape of the average Cost curve is concerned, there seems to be little purpose in abandoning the basically U-shaped curves of the orthodox analysis, since although the retail outlet may experience less steeply falling or less steeply rising costs as output increases than would the manufacturing firm, the principle of scale economies does not lose its fundamental validity.

In order to establish any worthwhile notion of retail pricing, it must be assumed that sellers typically wish to maximise their long run returns under prevailing circumstances. Such "circumstances" naturally embrace the considerations which must be given to the pricing policies of competitors, differences in the emphasis on commodities sold etc. Such a view is not without justification. In the long run, every seller will be anxious to "optimize" his position by earning as much money as he can for as long as possible. The assumption which follows therefore, is that no sellers enter the industry with the intention of making a quick profit and a rapid exit, but rather, that most sellers are even prepared to forego profit opportunities in the short run if they feel that they would be jeopardising their chances over the long period.

Whatever the method of pricing, an analysis of the Demand curve for the retailer reveals an interdependence of demand for the different commodities sold, and therefore, a tendency for changes in the prices of individual items to affect the demand for others. In addition, the retailer's price will reveal an interdependence between itself and those prices asked by his rivals.

In developing a theory of the firm in retailing along lines which admit the possibility that the majority of firms do consider the reactions of their actual or potential competitors, the problem of assessing the determinacy or otherwise of final outcomes arises. By "final outcomes" is meant the situation resulting from an interaction of competitors. There is some justification for assuming that the competition amongst such firms yields indeterminate results and that consequently the construction of anything but the vaguest analytical framework is of no value. Such a view would be directly opposed to that expressed in the work of Chamberlin and Robinson. Their competitive analyses for the large groups operating under conditions of monopolistic competition yield determinate results in so far as equilibrium is achieved for both the firm and the industry and their solutions are therefore not dynamic.

There is however, some reason to believe that under normal circumstances firms in competition - specifically retail firms - will attain some sort of equilibrium which will render the position determinate. Determinate equilibrium need not necessarily be a function of the number of firms in competition nor of their size. The smaller the number of competitors, the higher the price will be below which no-one will descend since each seller will be aware of the direct impact that a lowering of his price will have on his competitors and, in return, on his own total revenue.

Such an assumption is in conflict with that made by Chamberlin in the discussion of his large group case. In his analysis, Chamberlin made the assumption that each seller would lower his price simply to obtain a larger share of the market for himself, and in the belief that his competitors would not follow suit. The analysis subsequently concluded that all sellers would ultimately lower price in keeping with this principle. It appears therefore that Chamberlin's large group case does not apply to retailing.

The analysis provided in this study would conclude otherwise. In view of the mobility characteristic displayed by consumers, the tendency is for retailers to think differently. Retailers are appreciative of the advantages which the growth of urban shopping centres offers to consumers. Consumers are now in a position to find the cheapest source of supply at far less effort to themselves than previously envisaged by theorists. It is as a result of this that retailers are becoming increasingly conscious - and will continue to do so at a greater rate in view of the rapid growth of shopping concentrations - of the impact of their rivals' price/output policies on their own, and vice versa. It is no longer rational to analyse the behaviour of competitors - whether they be either large or small in number - as if they paid no attention to the interactions of the price and output policies of their fraternity.

For this reason, it is necessary to develop a theory which lies between two broad areas of agreement. Chamberlin's analysis of the 1930's proposed just such a framework. It took upon itself the task of describing the realistic case lying almost midway between the theory of Perfect Competition and the theory of Monopoly. It is now necessary to provide a framework which lies almost midway between the theory of Monopolistic Competition and the theory of Oligopoly.

Much of the theory of Monopolistic Competition as developed prior to the work of Triffin has been rejected as not adequate for an analysis of competition in retailing. At the same time an oligopoly analysis yielding a broadly indeterminate solution and

providing no analysis of dissimilar size firms in competition also requires elaboration if it is to be incorporated into a meaningful framework. The prime objective of any theory must be to provide a key to the processes experienced in the real world.

It has already been pointed out, in the discussion of Triffin's contribution, and the extensions implied by this study, that the Chamberlin analysis must incorporate the cross-elasticity system - both horizontal and vertical - if it is to be of any use.

We may now place the issues in perspective. There can be no doubt that the elasticity of demand for the goods and services of different sizes and types of retail outlet are not the same. In our discussion of the small specialist shop, we have examined the proposition that the seller is in a position to attract and retain clientele because he offers customers a range and type of product which the non-specialist store cannot. By the same token, the non-specialist store is in a position to cater for the buyer who does not require any out-of-the-ordinary items.

Such a position reflects itself in the Cost and Demand curves facing individual sellers. Where the specialist seller can charge a higher than average price for the range of products which he sells, so his costs will probably be correspondingly larger in the light of the fact that he requires bigger, possibly more expensive stocks and experiences a slower rate of turnover. The large non-specialist store, catering for the "average" customer - and therefore for the majority of buyers - has a considerably larger turnover and generally lower average costs.

Whether the systems of price-determination employed in each case will ultimately result in a similarity of the profit margin for both categories of sellers, is difficult to say, but the possibility should not be excluded and can be incorporated into the analysis. Obviously total profits are highly unlikely to be similar.

The result of such a situation, broadly speaking, is that the Demand and Cost curves facing sellers of different sizes and catering for somewhat different types of customer (although the commodities sold might be similar in physical characteristics) will be different and interdependent within and amongst firms.

If one were to compare, for example, the Demand and Cost curves facing two firms only, a number of conclusions could be drawn. One firm could be assumed to represent that type of retail outlet currently known as a "supermarket" and displaying such characteristics as low prices, little "service", a wide range of popular items and a dependence upon the broad mass of

customers for its existence. The other might be regarded as the "corner grocer's shop", selling items broadly similar to those of the other, but at higher prices, in more limited quantity and with a stronger element of "service". From most points of view, the products sold by each are "dissimilar" in the minds of consumers, but, if need be, eminently substitutable. The Demand and Cost curves are dissimilar. The small shop may be regarded as possessing a higher level of average costs and a more inelastic demand for its stock, implying that it may charge a higher price for its goods, on average, than the supermarket, but not necessarily higher than a competitor similar to itself.

The principle is as follows. Assuming factors of location to be irrelevant in view of the mobility of buyers⁽¹⁾, the higher the price charged by the supermarket, the more likely are consumers to transfer (or spread) their custom to the small shop, since price will no longer be a cause for preferring one shop to another. The opposite holds true. If the small shop lowers prices - and presumably therefore, the "service" content of its "product" - the customer will not be averse to transferring his custom to the supermarket.

The more similar the expenditures asked of consumers for a "basketfull" in the two outlets, the less likely is "service" to differ. Customers are, under such circumstances, not likely to prefer one seller to another. This situation raises some interesting analytical questions: (a) to what extent are the goods and services of the two sellers interchangeable, i.e. what is the magnitude of the cross elasticity of demand and what is the rate of change in cross elasticity of demand with a change in prices, and consequently (b) how is the range of operations with which each seller will be satisfied, determined? What role do the Cost and Demand curves of individual sellers play in the analysis?

Before proceeding to a discussion of these questions, another issue should be raised. Mention has already been made of the high cross-elasticity of demand for the goods and services of similar size and "product" shops. The Chamberlinian analysis, it has been shown, stopped short of intra-subgroup comparisons, while Triffin's analysis failed to build adequately on them. If we agree with the proposition that the cross-elasticity of demand for the "product" of shops selling the same commodities at roughly the same prices is high, we must also assume that the Demand curve facing the individual seller is highly elastic. The Chamberlinian argument

(1) See Chapter V above.

then, using the uniformity and symmetry assumptions on the issue of average costs and average revenue is therefore not strictly valid where it postulates the relative inelasticity of Demand curves.

It is valid, as we have attempted to show, if it is applied in the analysis of competition, firms of different sizes - as was the case in the preceding example. Within a range of prices, "products" will be dissimilar to the extent that cross-elasticities of demand are low. The Chamberlinian analysis of Demand would then appear to be valid (in acceptable analytic terms) only for the case which it did not postulate. It would, consequently, appear to be a fair reflection of Triffin's proposition. As soon as retail outlets of similar size and "product" are introduced into the analysis, the elasticity of demand for the "product" of any one seller increases quite significantly.

It should be stressed that the observations concerning the elasticity of demand for the two different varieties of shop are tenuous. The specialist small shop is more likely than the large shop to experience a relatively inelastic demand if it stocks the same or similar physical commodities, since it does provide a service which need not necessarily cost the shopowner very much. The large shop will, however, if it provides little service, be more likely to experience a relatively elastic demand, since a rise in prices may induce customers to shop at the smaller outlet.

Whether this is the case or not, the argument is not significantly altered. The proposition remains. Sellers of different sizes (and, more specifically, with different "AC curves") will be faced with relatively inelastic Demand curves when in competition with one another. Firms of the same size will possess highly elastic Demand curves when in competition with one another in view of the high cross-elasticity of demand for their products.

In developing a viable theory of the retail firm, therefore, it is necessary to incorporate into the analysis, a system whereby the competitive relations among similar and dissimilar sized (but similar commodity) firms can be established in a reasonably determinate manner.

THE DEMAND CURVE:

The Demand curve for the orthodox monopolistic competitor, as postulated by Chamberlin and Robinson, cannot reflect the existence of sellers selling at lower or higher prices. Such a situation does not fulfill the requirements of retail theory.

With a decrease in the price asked by a seller, it is quite

possible that some buyers might decide to take their custom elsewhere. This could result from a deterioration in the quality of service offered and the fact that the new conditions make other outlets more similar in the minds of buyers. Alternatively, it could result from a change in the capacity of the price reducing seller to stock goods different from others with the implication that, once again, the price-reducing shop becomes more like its competitors - to the point where consumers no longer distinguish between it and its former relatively lower-priced rivals.

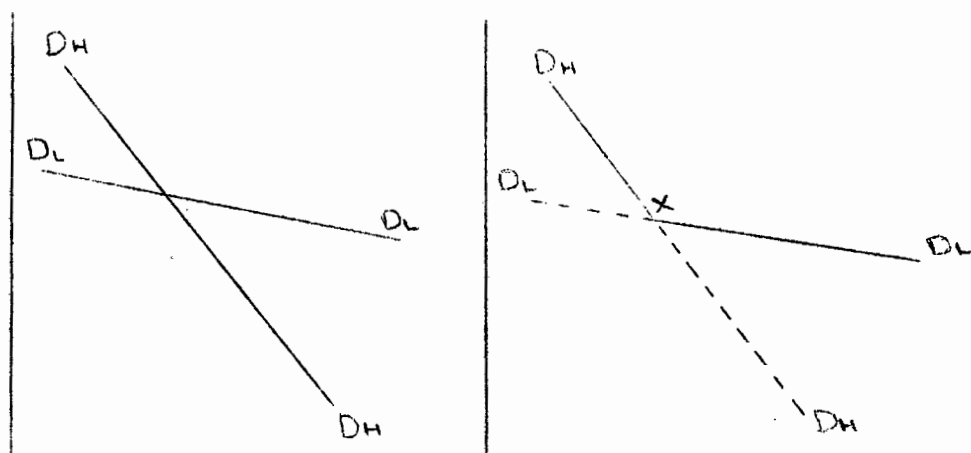
Broadly speaking, then, a lowering of price by a seller need not always result in an increase in the number of buyers purchasing from him, particularly if, as often happens in retailing, lower prices mean less service - service being, in most cases, the only reason for the continued support of particular customers.

With an increase in prices, the reaction of consumers will depend largely on the type of alternative seller. Should a specifically low-priced seller raise his prices, he might very well be bringing them "into line" with those of the "traditionally" higher priced seller. The result could be a loss of customers to the high priced seller, since customers will now be unable to discriminate on the basis of price.

The principle is as follows: The AR curve - if we assume for the moment that it is of finite elasticity - facing the small (higher price/cost) seller, and the AR curve facing the large (lower price/cost) seller, will naturally cover different ranges of price, except if the lower segment of the small seller's AR curve crosses the upper segment of the large seller's AR curve. The situation may be represented graphically with the aid of orthodox Demand curves.

It will be obvious that the Demand curves facing the two sellers do not, in the accepted sense, reflect the various price/output alternatives for the same "product".. However, in our discussions of the cross-elasticity of demand for goods and services, an attempt was made to indicate the high rate of substitutability for such goods and services and to regard this substitutability as a function of price. It has been pointed out that such interdependence of demand cannot be ignored. What is being reflected here is simply the point at which buyers will tend to regard one seller as being roughly equivalent to another for practical purposes. The number of buyers who respond to such an increase in price on the part of the low price seller (and vice versa on the part of the high price seller) need only be marginal, i.e. small, to affect the sales of the small seller quite appreciably.

If, therefore, it is assumed that the "differences" between the "products" of the two sellers are reflected in the relationship to one another of their respective Average Revenue curves, it will be evident that, as soon as the lower priced seller raises his price or the higher price seller lowers his, or both, the products become more similar in the minds of consumers. The result is that the cross-elasticity of demand for the respective products of both sellers increases and buyers are inclined to substitute.



In the diagram D_H and D_L represent the Demand curves of the "small" and "large" seller respectively. The small seller may be assumed to possess a certain advantage over the larger in that he is able to locate himself in areas in which the large seller could not. In view of the "convenience" which he represents to the consumer in his locality, it is reasonable to postulate a less elastic Demand curve in his case than in that of the large store when the two are examined in "competition" with each other and with rivals of the same size. The cross-elasticity of demand for the goods and services of large stores is great, and, as a result, a more elastic Demand curve must be postulated for the large store.

The diagram represents the position described. The small shop will possess a monopoly advantage - although not necessarily as strong as envisaged by orthodox theory - over the larger store, providing it offers a service to consumers greater (in the eyes of the consumer) than that provided by the latter. For this, it is entitled to ask a higher "price". Under such circumstances, the small seller will be relatively insulated from the effects of competition with the larger rival. Similarly, the large shop, asking generally lower prices, and providing less service, will be selling a "product" somewhat different from his smaller rival's. He, too, will tend to be competing more with rivals of his own size and variety rather than the small shop.

The two sellers, however, are selling similar physical commodities and must be regarded as being able to influence each other's shares of the market. The result is that, as the higher priced seller lowers his price along the Demand curve DH, he is making his "product" more similar to that sold by his lower priced rival(s). This is simply because the "prices" of the two sellers are being brought "into line" with each other and, because the higher priced seller is lowering his price, he is presumably also reducing the element of "service" in his "product". In other words, customers will no longer be able to differentiate effectively between the two sellers on the basis of "price" or "service". As the higher priced seller lowers his price along the curve DH towards X, the elasticity of demand for his "product" increases, since it becomes increasingly substitutable, in the mind of the consumer, for the "product" of the lower priced seller. The same process may be thought to operate in reverse, since a rise in price along DL will also increase the substitutability of the two "products".

As the higher priced seller lowers his "price" he will not only have to concern himself with the reactions of his close rivals (i.e. rivals of similar size), but will also have to consider the fact that he is bringing himself into direct competition with traditionally lower-priced sellers.

In such a situation, certain issues concerning elasticity arise. Principally, it is possible that the elasticity of demand for individual sellers, or for the group of similar competitors as a whole, may change in a hitherto unexpected direction as price changes. For example, the higher priced seller might, in terms of the orthodox analysis, be inclined to regard a price decrease on his part - unaccompanied by any similar action on the part of his immediate rivals - as being conducive to a reasonably marked expansion in his market. It has been attempted to show that this is not necessarily the case, for a specific reason. The individual who embarks on such a programme may in fact be bringing his prices more "into line" with those of the traditionally lower priced seller, with the result that his customers - actual or potential - no longer distinguish between his goods and those of his "new competitors" (the lower priced seller). It is possible that, not only would he fail to gain sufficiently large numbers of new customers to compensate, in total revenue terms, for his lower prices, but he might even lose some of his old customers, who no longer regard his goods as being sufficiently differentiated from his competitor's to warrant any particular shopping effort on their part.

Where a traditionally lower priced seller raises his price - while his immediate rivals maintain theirs - he would, in orthodox terms, be expected to shed some of his customers. This is also not necessarily so. By raising his price, he is bringing his prices "into line" with those of higher priced sellers, and may even gain customers who no longer distinguish between their former suppliers and himself. The gain may be large enough to compensate him for any of his own customers he might have lost when raising his price.

It is extremely difficult to determine, with great accuracy, the reaction of demand to changes in price in the manner described. It is difficult to establish whether the sellers discussed will in fact gain or lose customers - and if so, to what degree - with changes in price. All that can be said is that, for individual sellers (others keeping their prices constant) there exists a price range (the market price for the relevant category) at which the elasticity of substitution amongst sellers is great; largely below which it is likely that the seller will not gain many additional customers and largely above which it is likely that the seller will not lose many customers. On the other hand, there is the important zone surrounding the market price for the specific category of retailer, within which price increases will cause a significant loss of customers and price decreases, a significant gain, for individual sellers. This zone is one in which there is no real competition from sellers belonging to other categories but in which influence is only exerted by those sellers who display similar characteristics to the retailer concerned.

At X in the diagram, the "product" switches demand from DH to DL. The total demand for the "product" is therefore DH-X-DL. In this manner a break with orthodox theory may be indicated. The Demand curve is not a Demand curve for the single "product" of a single seller (or group of sellers characterized by uniform AC and AR curves). Instead, it is a composite Demand curve, made up of the individual curves characterizing categories of seller - from small to large - in competition within and across the "boundaries" of subgroups.

THE COST CURVE:

We have noted at various points that, in retail practice, each seller will price in a manner according to the influence which he thinks he will exert on his competitors, and vice versa. The principle is similar to that proposed by oligopoly theorists. Each seller will recognise the interdependence of both

similar and less similar sellers in the market, and will act accordingly. Such an attitude will be evident from the "markup" which he regards as providing him with a suitable return. The higher the "markup" (cost plus) percentage (and therefore, other things being equal, the price) that he asks, the greater the risk he takes in that his customers might desert him for similar, but lower priced suppliers. Similarly, the lower the "markup" he asks, and the lower the price, as a consequence, the more likely are his rivals to cut as well in an effort to retain their markets. It is possible that rival sellers might retaliate by cutting the price of other products, but even here, the seller will attempt to adjust his markup to the average prices asked. The markup then, will depend upon the individual seller's estimate of market reaction to his policies.

Another issue requires attention. It has already been suggested that the retailer is generally in a better position to adjust his "capacity" than is the manufacturer. This is simply because of the fewer indivisibilities which attend the sale of individual mainly small, commodities, than the output of large or "lumpy" capital equipment. As a result, the seller is generally able to adjust his capacity to the level which will yield him roughly the lowest average costs. With changes in the prevailing level of prices, adjustments may also be fairly rapid so that the individual seller is able to alter his stocks in order to sell an output which implies the lowest average costs.

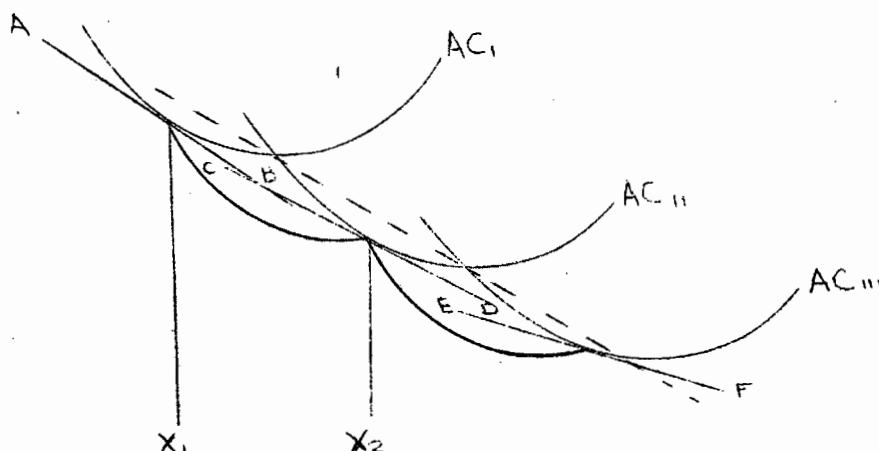
At the same time, the assumption has been made that, under most circumstances, the Demand curve facing the individual seller in a competitive retail environment is almost horizontal. If then, the retailer is able to adjust his stock turnover and the cost of holding stocks he may be able to avoid the "excess capacity" envisaged by the early theorists. The application and modification of the Chamberlinian concept of tangency is obvious. The distinction lies simply in the fact that Chamberlin's excess capacity postulate loses much of its significance when the AR curve is viewed as being similar in slope to that found under conditions of perfect competition.

Looked at from the point of view of "group equilibrium" - in this case simply the equilibrium of the group of competitors of the same size - the situation is less clear cut. If we are justified in assuming that retailers frequently find themselves operating at a price (i.e. of the "basketfull" which they sell) which does not cover average costs, let alone "normal profits", and that this situation is not necessarily one which will ultimately converge upon the equilibrium position envisaged by Chamberlin

because it does not invariably deter new entrants from coming into the group or encourage old firms to leave, we cannot accept the notion of a tangency solution for the "group" as a whole.

For this reason, it is necessary to establish a view of equilibrium not for individual groups, but for all categories of sellers selling similar commodities, considered together. This equilibrium will relate closely to the oligopolistic appraisal of the retail market and the notion that individual firms, and separate groups, realise their interdependence.

Assuming that the two groups of sellers we are currently examining may be distinguished more easily on the basis of Cost curves rather than Demand curves, the position may be represented thus



In the diagram, curves ACI, ACII and ACIII are the Average Cost curves appropriate to sellers of different sizes, respectively. Costs are the determinant of output, and the lower level of costs incurred by the large retailer enables him to sell larger quantities at lower prices than his smaller rivals in alternative categories. Price is asked on the basis of direct cost plus markup. This markup must be sufficiently large to cover indirect costs and a margin of "fair" profit, and will imply a subjective maximization of profit.

The Demand curves for each of the shops of different sizes are equal to the slope of the Average Cost curves at the tangency points. Under such circumstances, as sellers moved in size from "small" to "large", the elasticity of demand for their goods and services would change. This is illustrated by the slopes of the Demand curves, AB, CD and EF. The Average Cost curve is thus a locus of points (at which sellers are able to sell "profitably") on a number of competitive Demand curves, each characterizing a different price for the "basketfull" offered by the shop.

At any output greater than X_1 , the higher priced seller would find his AC exceeding his AR unless he were prepared to accept a lower markup than before. By doing so, he would naturally induce his rivals to cut their prices as well. However, at any output less than X_2 , the AC of the lower priced seller would be higher than his AR, and possibly equal to, or greater than, the lowest AC of the higher priced seller. The same observations may be applied to the largest seller (3). One might imagine that there exists for a wide range of prices lying between those asked by the sellers in question, Average Revenue and Cost curves which could conceivably represent positions in which categories of sellers are being considered. Amongst these broad categories lies the range of possible AR/AC relationships relevant to the different types of seller.

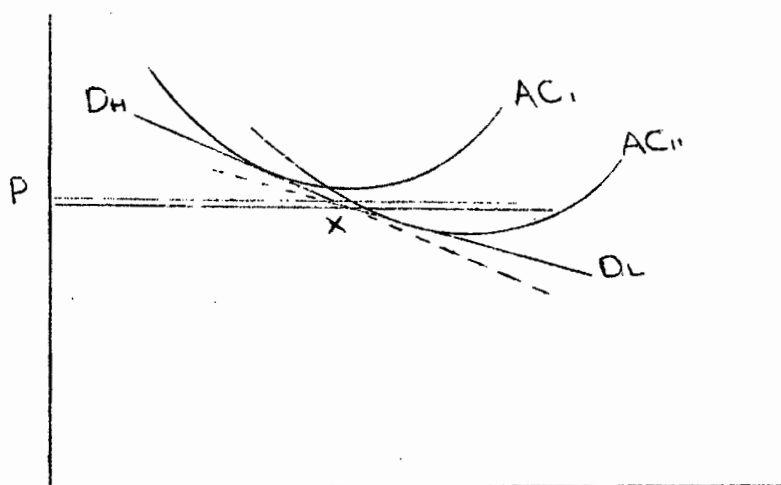
It will be noted that, if any one seller selling at a low price, decides to raise his price, he will lose customers at that price to his immediate rivals, provided they continue to sell at the lower price. By raising his price, he will be obliged to accept a decrease in sales in any case, since at that price the demand for the group of products being sold - irrespective of the size of the seller - is less than it is at a lower price. In other words, the "sales curve" (a locus of the tangency points on the AC curves) facing all the sellers in the "industry" (i.e. the group composed of all sellers selling commodities for which the cross-elasticity of demand is great) is of finite elasticity. Even if his AC are lower over a wide range than are those of his higher priced rivals, he will be unable to avail himself of the opportunity to make excess profits since, by raising his price, he will be restricting his output. His Average costs therefore, are higher than they were at a larger output. Similarly, by restricting his output, he will cause his Average costs to rise and will have to raise his price to cover his costs and ensure a margin of profit.

By raising his price, a competitor in any subgroup (category) will be bringing it "into line" with sellers in other subgroups. It will not be possible for any seller whose AR curve is lying at a tangent to his AC at a position near its lowest point, to lower his price to compete with sellers in lower price groups, since he will incur losses. Similarly, under no circumstances will a low cost seller be in a position to raise his price at any gain to himself. No matter what the position of the Average Cost curve, any seller raising his price will lose customers to that category of sellers charging a price below his.

Turning now to the question of "markup", it is possible that a seller will be able to change his price by deciding to accept a lower or higher markup. Under such circumstances, no modification of the analysis is required. There will naturally be a limit below which such a markup cannot be reduced. Until that point is reached however, the individual seller will be vulnerable to the competition of sellers just like himself, and the concept of cross-elasticity of demand provides a guide in such a situation. His competitors will react, since his actions will affect their business. They will therefore be inclined to reduce their prices as well. If a seller decides to raise his markup, his AC will rise and the process already described becomes relevant.

No seller knows the "demand" for his commodities at any price, and pricing is therefore largely a matter of "trial and error". If, owing to better buying facilities, the AC curve of any seller shifts downward, price will fall, and the seller - or category of sellers - will move into competition with a lower price group. The range within which any subgroups of retailers are in competition with one another depends on the position of their Average Cost curves. The zone of "indeterminacy", such as it is, would lie between points on different AC curves.

Returning to our diagram



At "price" range p , the area of indeterminacy will prevail. Since the "prices" and "products" of both sellers are now similar (i.e. both sellers ask prices in "range" p , and by our analysis, provide similar products), the number of customers available to each seller is indeterminate. It is only in this region that uncertainty will exist because in no other price range are the basketsful of the sellers sufficiently similar for the cross-elasticity of demand for the goods and services of each to be so great. In this region, therefore, each seller will contemplate

higher or lower markups in order to attract more of the customers available at the price. The "price" of the "basketful" under these circumstances is really therefore a narrow range of price alternatives which will depend upon the "markup" chosen by individual sellers. The process is one of trial and error since (a) no seller knows what the "demand curve" for his "basketful" is and (b) no seller knows how changes in the prices of individual items are going to affect his overall sales and (c) no seller knows all the prices prevailing in his neighbourhood. He will therefore adjust his markup on an ad hoc basis. The higher priced seller selling in the range of indeterminacy would have to decide whether to lower price (markup) to sell more without reducing his AR below his AC. The lower priced seller would naturally have to do the same.

Whatever the reasoning, this area of indeterminacy represents the zone in which sellers of different sizes will be directly competitive. Since there exist a wide range of different sizes and prices characterizing different categories of sellers, there exists also a wide range of such zones. At every possible price and output then, each seller - or category of sellers - will be inviting competition from others in their own as well as different categories. Within each zone, the capacity of sellers to compete will depend upon the markup they are prepared to accept. This they will bear in mind.

The real significance of the diagram lies in the "scalloped" concept of the Sales curve as represented by the heavy line side of the individual AC curves. It is at various points along this "sales curve" that the significant price/output positions of all categories of sellers will lie. It has already been seen that the position on the curve at which any seller will find himself is indeterminate in so far as it will depend upon what markup he and his competitors will choose. From this analytical point of view, it does provide a picture of the market situation with which any seller embarking on a price-setting programme is faced. In setting a price - and thereby selecting a markup - the seller will have to consider the reactions of rivals similar in size to himself, and the reactions of rivals of different sizes.

Turning now to the question of equilibrium, it becomes necessary to modify the original Chamberlinian concept, owing to the modified structure of the "industry". It may be assumed that each seller will wish to optimize the use of his capacity by producing at the lowest point that he is able to achieve on his AC curve. Only at this point will he be sure that no one in his

category will be in a position to sell more cheaply than himself. If the seller finds it necessary to lower his markup in order to compete with rivals in the same category, he will do so. On the other hand, no seller will long be able to reduce his prices to be able to compete with significantly lower cost sellers, since he will then be operating below the point where he covers average costs. If he wished to continue in business under such circumstances, he would have to find a way of lowering his AC either through bulk buying or better selling techniques.

The high level of failures in the retail field results from the belief - held by large numbers of newcomers - that they are able to be more "acceptable" than predecessors who have failed. The fact is that most retailers are not able to lower their average costs and attempt to improve their position by accepting a lower markup in an effort to compete with lower cost/price shops. The result is that they find themselves competing in a category in which they have no justification (as far as AC are concerned) to be. Since retailing is intensely competitive in the manner we have already discussed, other sellers are induced to cut prices as well, and entire categories of sellers fail to cover their average costs "adequately".

The consequent issue then, is how industry equilibrium is established. It is possible to say that competition amongst subgroups yields an indeterminate equilibrium lying somewhere between the prices at which higher cost sellers will go no lower in price, and lower cost sellers will go no higher. It is a justifiable notion that, for competing subgroups as a whole - as opposed to individual members of such subgroups - this is a zone in which a certain stability could possibly arise. It is however, difficult to establish this zone *ex ante* since the markups which sellers are prepared to accept will vary.

As far as group equilibrium is concerned, it is only possible to say that the responsiveness of demand to changes in price will make each seller keenly aware of the sales opportunities available to him if he should lower price. Even though he is aware of his competitors' reactions to such a situation, the pressure to lower prices will - even if he does not succumb to it - always be greater than the pressure to raise them. "Undercutting" is common practice in retailing.

The tendency then, is for each subgroup to attempt an expansion of capacity, a lowering of Average costs and therefore the opportunity to move into a lower cost subgroup to provide a justification for lower prices. For each seller within a subgroup this

will be the aim, and the responsiveness of demand and competition to the individual seller's change in price will reinforce this downward tendency.

The disequilibria then, which occur "intra-subgroup" in retailing are really only a part of a long run tendency toward equilibrium at the lowest point on the AC curve of the lowest cost seller in any competitive area, provided, of course, that the output at this point will fill the market. The size, costs, prices and sales of the largest seller will always appear as a target upon which the higher cost sellers will consciously or unconsciously attempt to converge. They will adjust their policies accordingly. The disequilibria characteristic of retail competition at various levels of activity may be regarded simply as issues which work themselves out on the descending side of the industry AC curve, the lowest point on which will ultimately be the zone of industry equilibrium. Simply stated, whilst these disequilibria prevail, they may be regarded as indications that the downward movement of prices and costs has not yet reached its perigee at the lowest AC curve. Since few firms are in a position to operate at such a low cost, most other, smaller firms will have eliminated themselves in the process of price reduction and the low cost firms - once they have resolved the question of their markup - will no longer attempt to lower prices further. At this point, equilibrium will have been reached. The stage at which firms will "eliminate" themselves naturally depends upon the size of the "market" in which they are operating, but, since the tendency to reduce prices is strong, the danger that AR will be reduced below AC prevails at all times.

It becomes obvious that the number of firms in the industry is only a part of the explanation of equilibrium, in so far as their exit enables others to expand. It may, however, be the understanding at the point of equilibrium, that lower prices will ruin business for all, that assists in the maintenance of equilibrium. Similarly, at the point of equilibrium, the individual firms within a category will not find it advantageous to raise prices since their competitors will not follow suit and the cross-elasticity of demand will be such as to cause a loss of customers.

There is no reason to believe that a permanent equilibrium is ever reached. No sellers can be certain that their prices and costs are the lowest possible. All that can be said is that there will be a tendency in the direction of equilibrium.

CONCLUSION

CHAPTER VIII

Since the publication of both The Theory of Monopolistic Competition and The Economics of Imperfect Competition, a vast literature has appeared in an attempt to qualify the original concepts. The purpose of this paper has been to trace the development of these works and to assess the modifications necessary to make them more generally applicable, albeit in a theoretical context, to the situations which characterise the firm in Retail Trade.

Since, however, the task of adapting existing theory could only be effectively undertaken once all relevant issues had been discussed as a coherent body of thought, the first section of this paper concerned itself with an analysis of the major theses and the distinctions between them. The subsequent sections have dealt with the more significant criticisms which have emerged, and the selection of those aspects which the present writer considered necessary for further analysis and incorporation in an alternative framework.

The entire analysis has been presented at a level of abstraction similar to that found in the works of Chamberlin and Robinson, and no attempt has been made to employ empirical techniques in order to validate or invalidate hypotheses.

2

Prior to the development of a theory of the firm which enabled economists to create - for purposes of analysis - a set of conditions under which the concepts of "monopoly" and "competition" could be blended, traditional theory had come to regard the two as being mutually exclusive. The product of this "Weltanschauung" was an analytical technique inadequately equipped for the task of explaining the phenomena of everyday experience, since the assumptions on which the framework rested were either too narrow or too wide to fit the reality of the situation.

It was the explicit recognition of the need for a theory admitting the "imperfections" of the real world - previously relegated to vaguely defined sections on Monopoly and generally regarded as problems relating to short periods - which resulted in the new approach to the theory of the firm.

The theory of Monopolistic Competition occupied itself with

a study of the firm and developed the analysis of "industrial equilibrium".

The objective of this method of approach was to consider the cost and revenue factors which assist in the establishment of the internal equilibrium of the firm and, subsequently, to examine the position of the firm within the general equilibrium framework. To achieve this, the theory had to encompass the competitive relationships which exist amongst firms and provide a means of analysing the effects of the price/output decisions of individual producers upon one another.

The notion of "interdependence" amongst firms formed a cornerstone of the theory and was largely an elaboration of the elementary Cournot and Edgeworth models of duopoly, which provided some of the rarer classical insights into the possibility of a market position lying between pure monopoly and competition. The recognition of the fact that consumers, for a number of possible reasons, distinguish amongst the individual "products" of each member of a group of competing manufacturers, has meant that each producer should be regarded as possessing a "monopoly" over his particular good, even though the cross-elasticities of demand for his product and others might be sufficiently high to warrant the description of closely competing substitutes.

The conceptual framework built upon this fundamental observation has been shown to be vast and intricate. At the same time, structural inadequacies have evidenced themselves in the attempt to apply the unmodified theory to the general facts of "Retailing". The difficulty of applying important areas of the analysis in its present state to such a significant sector of commercial activity has necessitated a review of the basic tools of orthodox theory.

Surprisingly, the literature, both theoretical and empirical, concerning the general validity of the theories of Imperfect Competition in the field of retailing is limited. It has therefore, been necessary to provide a brief review of the areas in which the orthodox approach requires attention and, subsequently, to state the issues most relevant to the development of a modified analysis.

The thesis, as it has been developed here, is directed partly at indicating the nature of the "demand" facing individual retailers in competition with one another. In this respect a curve displaying characteristics different from those envisaged by orthodox analysts, has been postulated. This structure, combined with a reappraisal of the nature of the competition which

may be thought to exist amongst retailers, has provided a different view of the question of "Imperfect" competition. For this reason, it is hoped that the present study will have broken some new ground.

? Much remains to be done. The proof of the theory must lie in its empirical palatability. It has unfortunately not been possible to establish an empirical basis of any sort, but it is hoped that the views expressed in this paper will recommend themselves to further reflection. Only in this way can the work be of its fullest value.

-o-o-oOo-o-o-

BIBLIOGRAPHY

- Abbot, L., Quality and Competition, Columbia, New York, 1955.
- Abramovitz, M., 'Monopolistic Selling in a Changing Economy', Quarterly Journal of Economics, February 1938.
- Adelman, M.A., 'Equilibrium in Multi-Process Industries - Further Comments', Quarterly Journal of Economics, May 1946.
- Andrews, P.W.S., 'Some Aspects of Competition in Retail Trade', Oxford Economic Papers, June 1950.
Manufacturing Business, London, 1955.
Fair Trade (with F. Friday), London, 1960.
On Competition in Economic Theory, London, 1964.
- Archibald, G.C., 'Chamberlin versus Chicago', Review of Economic Studies, October 1961.
- Bain, Joe S., 'Market Classifications in Modern Price Theory', Quarterly Journal of Economics, August 1942.
 'A Note on Pricing in Monopoly and Oligopoly', American Economic Review, March 1949.
Barriers to New Competition, Cambridge, Mass., 1956.
- Bernstein, P.L., 'Profit Theory - Where do we go from here?', Quarterly Journal of Economics, August 1953.
- Bliss, P., 'Price Determination at the Department Store Level', Journal of Marketing, July 1952.
- Boulding, K., 'The Theory of the Firm in the Last Ten Years', American Economic Review, December 1942.
- Burns, A.R., The Decline of Competition, New York, 1936.
- Cassels, J.M., 'Excess Capacity and Monopolistic Competition', Quarterly Journal of Economics, May 1937.
- Chamberlin, E.H., 'Monopolistic or Imperfect Competition?', Quarterly Journal of Economics, August 1937.
 'Reply to Kaldor', Quarterly Journal of Economics, May 1938.
 'Reply to Hawkins', Quarterly Journal of Economics, August 1939.
 'Advertising Costs and Equilibrium: A Rejoinder', Review of Economic Studies, 1944/45.
 'Proportionality, Divisibility and Economies of Scale', Quarterly Journal of Economics, February 1948.

- Chamberlin, E.H., 'An Experimental Imperfect Market', Journal of Political Economy, April 1948.
 (continued) 'Monopolistic Competition Revisited', Economica, November 1951.
 'Full Cost and Monopolistic Competition', Economic Journal, June 1952.
 'The Product as an Economic Variable', Quarterly Journal of Economics, February 1953.
The Theory of Monopolistic Competition, Cambridge, Mass., 1956.
Towards a More General Theory of Value, Oxford University Press, 1957.
 'The Origin and Early Development of Monopolistic Competition Theory', Quarterly Journal of Economics, November 1961.
- Clark, J.M., 'Towards a Concept of Workable Competition', American Economic Review, June 1940.
- Clemens, Eli W., 'Price Discrimination in Decreasing Cost Industries', American Economic Review, December 1941.
 'Price Discrimination and the Multiple Product Firm', Review of Economic Studies, 1951/52.
- Coase, R.H., 'Some Notes on Monopoly Price', Review of Economic Studies, 1937/38.
- Colberg, M., 'Monopoly Prices Under Joint Costs: Fixed Proportions', Journal of Political Economy, February 1941.
- Cooper, W.W., 'The Theory of the Firm: Some Suggestions for Revision', American Economic Review, December 1949.
 'A Proposal for Extending the Theory of the Firm', Quarterly Journal of Economics, February 1951.
- Copeland, M.A., 'Competing Products and Monopolistic Competition', Quarterly Journal of Economics, November 1940.
- Due, J.F., 'A Theory of Retail Price Determination', Southern Economic Journal, April 1941.
- Enke, S., 'Profit Maximisation Under Monopolistic Competition', American Economic Review, June 1941.
- Farrell, M.J., 'The Case Against the Imperfect Competition Theories', Economic Journal, June 1951.
- Fellner, W., Competition Amongst the Few, New York, 1960.
- Ford, P., 'Excessive Competition in the Retail Trade', Economic Journal, September 1936.

- Friedman, M., 'The Methodology of Positive Economics' in Essays in Positive Economics, Chicago University Press, 1966.
- Fulop, C., Competition for Consumers, London, 1964.
- Galbraith, J.K., 'Monopoly Power and Price Rigidities', Quarterly Journal of Economics, May 1936.
- Gordon, R.A., 'Short Period Price Determination in Theory and Practice', American Economic Review, June 1948.
- Greenhut, M.L., Plant Location in Theory and Practice: the Economics of Space, North Carolina, 1956.
- Gurzynski, Z.S., 'A Theory of Spatial Realities', South African Journal of Economics, March 1966.
- Haley, B.F., 'Value and Distribution', in A Survey of Contemporary Economics (ed. Ellis, H.S.), Illinois, 1959.
- Hall, Margaret, Distributive Trading, London, 1947.
- Hall, R.L., and Hitch, C.J., 'Price Theory and Business Behaviour', Oxford Economic Papers, May 1939.
- Harrod, R., 'Law of Decreasing Costs', Economic Journal, December 1931.
 'Doctrines of Imperfect Competition', Quarterly Journal of Economics, May 1934.
Economic Essays, London 1952.
- Hawkins, E.R., 'Note on Chamberlin's Monopoly Supply Curve', Quarterly Journal of Economics, August 1939.
 'Marketing and the Theory of Monopolistic Competition', Journal of Marketing, April 1940.
- Heflebower, R.B., 'Towards a Theory of Industrial Markets and Prices', American Economic Review (Papers and Proceedings), 1954.
- Hicks, J.R. 'The Process of Imperfect Competition', Oxford Economic Papers, February 1954.
- Higgins, Benjamin, 'Elements of Indeterminacy in the Theory of Non-Perfect Competition', American Economic Review, September 1939.
 'Reply to Lynch', American Economic Review, June 1940.
- Holton, R.H., 'On the Measurement of Excess Capacity in Retailing', Review of Economic Studies, 1956/57.
 'Price Discrimination at Retail: The Supermarket Case', Journal of Industrial Economics, October 1957.

- Hotelling, H., 'Stability in Competition', Economic Journal, March 1929.
- Isard, W., 'Distance Inputs and the Space-Economy', Quarterly Journal of Economics, May and August 1951.
- Kahn, R.F., 'Notes on Ideal Output', Economic Journal, March 1935.
- Kaldor, N., 'A Classificatory Note on the Determinateness of Equilibrium', Review of Economic Studies, February 1934.
 'The Equilibrium of the Firm', Economic Journal, March 1934.
 'Mrs Robinson's Economics of Imperfect Competition', Economica, August 1934.
 'Professor Chamberlin on Monopolistic and Imperfect Competition', Quarterly Journal of Economics, May 1938.
 'The Economic Aspects of Advertising', Review of Economic Studies, 1950/51.
- Leontief, W., 'Implicit Theorizing: A Methodological Criticism of the Neo-Cambridge School', Quarterly Journal of Economics, February 1937.
- Lerner, A.P., 'The Concept of Monopoly and the Measurement of Monopoly Power', Review of Economic Studies, 1934/35.
 'Notes on Duopoly and Spatial Competition', Journal of Political Economy, April 1937 (with Singer, H.W.) .
 'A Note on Spatial Price Discrimination', Review of Economic Studies, 1937/38 (with Singer, H.W.)
- Lester, R.A., 'Equilibrium of the Firm', American Economic Review, March 1949.
- Levy, H., Retail Trade Associations, London 1942.
- Levy, M.J., Jr., 'Note on Some Chamberlinian Solutions', American Economic Review, June 1940.
- Lewis, W.A., 'Notes on the Economics of Loyalty', Economica, November 1942.
 'Competition in Retail Trade', Economica, November 1945.
- Lynch, E.S. 'A Note on Mr Higgins's "Indeterminacy in Non-Perfect Competition"', American Economic Review, June 1940.
- Macgregor, D.H., Economic Thought and Policy, Oxford University Press, 1949.

- Machlup, F., 'Monopoly and Competition: A Classification of Market Positions', American Economic Review, September 1937.
 'Evaluation of the Practical Significance of the Theory of Monopolistic Competition', American Economic Review, June 1939;
The Economics of Sellers Competition, Baltimore, 1952.
- McClelland, W.G., Costs and Competition in Retailing, London, 1967.
- Morgan, Theodore, 'A Measure of Monopoly in Selling', Quarterly Journal of Economics, May 1946.
- Nettl, J.P., 'A Note on Entrepreneurial Behaviour', Review of Economic Studies, 1956/57.
- Nichol, A.J., 'The Influence of Marginal Buyers', Quarterly Journal of Economics, November 1934.
- Norris, Ruby T., 'The Analysis of Demand', Quarterly Journal of Economics, November 1939.
- Nutter, G.W., 'Competition: Direct and Devious', American Economic Review (Papers and Proceedings), 1954.
- Papandreou, A.G., 'Market Structure and Monopoly Power', American Economic Review, September 1949.
- Paul, M.E. 'Notes on Excess Capacity', Oxford Economic Papers, February 1954.
- Pearce, I.F., and Amey, L.R. 'Price Policy With a Branded Product', Review of Economic Studies, 1956/57.
- Robertson, D.H., Shove, G.F., and Sraffa, P., 'Increasing Returns and the Representative Firm: A Symposium', Economic Journal, March 1930.
- Robinson, E.A.G., 'The Pricing of Manufactured Products', Economic Journal, December 1950.
 'The Pricing of Manufactured Products and the Case Against Perfect Competition: A Rejoinder', Economic Journal, June 1951.
- Robinson, Joan, 'Imperfect Competition and Falling Supply Price', Economic Journal, December 1932.
 'What is Perfect Competition?', Quarterly Journal of Economics, November 1934.
 'Imperfect Competition Revisited', Economic Journal, September 1953.
The Economics of Imperfect Competition, London, 1965.

- Rothschild, K.W., 'Price Theory and Oligopoly', Economic Journal, September 1947.
- Silberston, A., 'The Pricing of Manufactured Products: A Comment', Economic Journal, June 1951.
- Silcock, T.H., 'Some Problems of Price Maintenance', Economic Journal, March 1938.
- 'Professor Chamberlin and Mr Smith on Advertising', Review of Economic Studies, 1948/49.
- 'Advertising Costs in Monopolistic Competition', in Dundee Economic Essays, (ed. Eastham, J.K.), Dundee The School, 1955.
- Smith, Henry, 'Advertising Costs and Equilibrium', Review of Economic Studies, 1934/35.
- 'Discontinuous Demand Curves and Monopolistic Competition: A Special Case', Quarterly Journal of Economics, May 1935.
- 'The Imputation of Advertising Costs', Economic Journal, December 1935.
- Retail Distribution, London, 1937.
- Smithies, A., 'The Theory of Value Applied to Retail Selling', Review of Economic Studies, 1938/39.
- 'Equilibrium in Monopolistic Competition', Quarterly Journal of Economics, November 1940.
- 'Equilibrium in Monopolistic Competition: An Addendum', Quarterly Journal of Economics, February 1942.
- Soucey, R.D. 'Group Equilibrium With Selling Costs Variable', Review of Economic Studies, 1938/39.
- Sraffa, P., 'The Laws of Returns Under Competitive Conditions', Economic Journal, December 1926.
- Stigler, G.J., The Theory of Price, New York, 1947.
- 'The Economics of Information', Journal of Political Economy, June 1961.
- Stolper, W.F., 'The Possibility of Equilibrium Under Monopolistic Competition', Quarterly Journal of Economics, May 1940.
- Streeten, P., 'Reserve Capacity and the Kinked Demand Curve', Review of Economic Studies, 1950/51.
- Sweezy, P.M. 'On the Definition of Monopoly', Quarterly Journal of Economics, February 1937.
- 'Demand Under Conditions of Oligopoly', Journal of Political Economy, August 1939.

- Triffin, R., 'Reply to Weintraub', Quarterly Journal of Economics, August 1942.
- Monopolistic Competition and General Equilibrium Theory, Cambridge, Mass., 1949.
- Wallace, D.H., 'Monopolistic Competition at Work', Quarterly Journal of Economics, February 1937.
- Weintraub, S., 'The Classification of Market Positions: Comment', Quarterly Journal of Economics, August 1942.
- White, H.G., Jr., 'A Review of Monopolistic and Imperfect Competition Theories', American Economic Review, December 1936.
- Wolfe, J.N., 'The Representative Firm', Economic Journal, June 1954.
- Yamey, B.S., 'Imperfect Competition in Retail Trades', Economica, February 1951, (with Hood, J.)
- 'Competition in the Retail Grocery Trade: 1850-1939', Economica, November 1955 (with Pennance, F.G.)